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TWIN OTTER
DHC-6-300

Revision 3.3 - March 2011

PILOT CHECKLIST

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Courses for the DHC-6 aircraft are taught at the following FlightSafety Learning Centers:

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REVISION TRANSMITTAL

March 15, 2010

This is revision 3.3 effective March 2011 for the DHC-6 Pilot Checklist. Changes have been made to the Normal Procedures, Before Start section,Cockpit Preparation section and to the Emergency Abnormal, Power Loss After Take-Off section and Airstart section

November 1, 2010

This is revision 3.3 effective March 2011 for the DHC-6 Pilot Checklist. To the normal section, changes have been made to the after start, before takeoff, after landing, shutdown, cockpit preparation and autopilot checklists.

Changes were made to the specifications and limitations section as well as the engine limitations chart. Changes were also made to the airstart and propeller overspeed abnormal checklists.

In addition, an avionics abnormal procedures section has been added with three abnormal avionics procedures.

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LIST OF EFFECTIVE PAGES

Checklist revision # and date, with corresponding AFM revision:

Original	OCTOBER 1993
Revision 1	APRIL 1995 (AFM Rev 44)
Revision 2	APRIL 1996 (AFM Rev 45)
Revision 3	OCTOBER 2005 (AFM Rev 51)
Revision 3.1	SEPTEMBER 2006
Revision 3.2	NOVEMBER 2010
Revision 3.3	MARCH 2011

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The DHC-6 checklist is designed to assist trained pilots verify that the proper procedures have been carried out.
The checklist provides the flight crew with abbreviated information derived from the DOT Approved AFM to operate the airplane in most Normal and Non-normal/Emergency situations.
It is the Operator's responsibility to ensure the checklists are applicable to their type of operation. In the event of an inconsistency between any checklist and the approved Airplane Flight Manual, the AFM takes precedence.

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Pilots must be aware that checklists cannot be created for all conceivable situations and are not intended to preclude good judgement. In some cases deviation from the checklists may, at the discretion of the PIC, be necessary. Under all circumstances, the first priority is to maintain safety of the airplane for the duration of the flight.

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PREFACE

Checklists can be completed in three different manners:

(C&R), (R&D) or (S).

(C&R) = **Challenge & Response**

(R&D) = **Read and Do**

(S) = **Silent**

The **Challenge and Response** checklist is accomplished by the non-flying pilot challenging the flying pilot with each appropriate item. The flying pilot will respond with the appropriate response and cockpit action.

The **Read and Do** checklist is accomplished solely by the non flying pilot. The non-flying pilot will read the entire checklist aloud while doing the appropriate cockpit actions.

The **Silent** checklist is accomplished by the non flying pilot with no verbalizing (except if an item needs confirming). The checklist is both read and actioned silently with no involvement from the other crew member.

NOTE: All items marked with an asterisk (*) should be confirmed by both pilots.

Certain Emergency and Abnormal Procedures have memory items associated with them. These memory items are identified by being boxed and shaded in. If a checklist is conducted that has memory items, these items will be completed prior to checklist consultation. After these items are complete and the checklist is referred to, the memory items will be confirmed complete, by reading the checklist from the beginning.

Be sure to read any notes, cautions or warnings associated with any checklist.

In the performance section, all speeds and most tables are based on the SFAR 23 data.

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NORMAL PROCEDURES

ORIGINATING BEFORE START CHECKLIST (C&R)

1. Fire Extinguisher(s) . . . . .CHARGED AND SECURE
2. First Aid Kit . . . . .SEALED AND SECURE
3. Emergency Exits . . . . .UNOBSTRUCTED / SECURE
4. Cabin Furnishings . . . . .CHECKED
5. Passenger Safety Cards . . . . .PRESENT
6. Rear Left Cabin Door . . . . .LOCKING PINS SECURE
7. All Interior Lights . . . . .CHECK / AS REQUIRED
8. All Exterior Lights .CHECK / AS REQUIRED

BEFORE START (C&R)

1. Exterior Check . . . . .COMPLETED
2. Cockpit Preparation . . . . .COMPLETED
3. ATIS & Clearance . . . . .RECEIVED
4. Takeoff Briefing . . . . .COMPLETED
5. Passenger Briefing . . . . .COMPLETED
6. Control Locks . . . . .REMOVED
7. DC MASTER Switch . . . . .ON
8. EXTERNAL/BATTERY Switch . . . . .AS REQUIRED
9. Hydraulic Pressures . . . . .CHECK
10. Parking Brake . . . . .SET
11. BEACON . . . . .ON
12. FASTEN BELT . . . . .ON
13. NO SMOKING . . . . .ON
14. POWER Levers . . . . .IDLE

NOTE

Start engines with prop levers in the MAX RPM position if pressure altitude is less than 3000' and temperature is less than 10º C.

15. PROP Levers . . . . .AS REQUIRED
16. FUEL Levers . . . . .OFF
17. Caution Lights . . . . .CHECK
18. FUEL SELECTOR . . . . .NORMAL
19. FUEL QUANTITY . . . . .SUFFICIENT
20. BOOST Pumps . . . . .ON
21. AVIONICS MASTER . . . . .OFF
22. Doors . . . . .SECURE

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AFTER START (C&R)

1. EXTERNAL/BATTERY Switch	BATTERY
2. External Power	DISCONNECTED
3. PROP Levers	MAX RPM
4. GENERATORS	ON
5. DC VOLTS & DC LOADS	CHECK
6. Cabin Lights	AS REQUIRED
7. AVIONICS MASTER	ON
8. BLEED AIR	AS REQUIRED
9. Cabin Heat / Air Conditioning	AS REQUIRED
10. PITOT HEAT	AS REQUIRED
11. VALVE HTR	AS REQUIRED
12. FLAPS	SET FOR TAKEOFF
13. Standby Attitude Indicator	ON
14. AUTOFEATHER	SELECT
15. Flight Instruments	SET & CROSS-CHECK
16. Compass/Gyros	CHECK
17. Transponder/TCAS	STANDBY
18. WING FUEL TANKS	ENGINE FOR 30 SECONDS, THEN OFF
19. Trims	SET FOR TAKEOFF

TAXI (R&D)

1. TAXI LT	ON
2. Brakes	CHECK
3. Flight Instruments / Navigation Instruments	SET/NO FLAGS
4. Engine Instruments	NORMAL
5. BATTERY TEMPERATURE	CHECK

GROUND CHECKS

1. Autofeather System
2. Propeller Overspeed Governor
3. Beta Backup System
4. Specific Systems if Required for Flight

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BEFORE TAKEOFF (C&R)

1. FLAPS	SET FOR TAKEOFF *
2. PROP Levers	MAX RPM *
3. Trims	SET FOR TAKEOFF *
4. Flight Controls	FREE / FULL TRAVEL
5. WING FUEL TANKS	OFF
6. Fuel Quantity and Boost Pumps	CHECK/ON
7. Caution and Advisory Lights	CHECK/CONSIDERED
8. AUTOFEATHER System	CHECKED/SELECTED
9. BETA BACKUP System	CHECKED
10. INTAKE ANTI ICE	AS REQUIRED
11. PROP DEICE	AS REQUIRED
12. WINDSHIELD HEAT	AS REQUIRED

LINE UP (R&D)

1. LANDING Lights	ON
2. ANTI COLL Lights	ON
3. Transponder / TCAS	ON
4. Headings	CHECK
5. INTAKE DEFLECTORS	AS REQUIRED

AFTER TAKEOFF (S)

1. FLAPS	ZERO
2. Climb Power	SET
3. Cabin Signs	AS REQUIRED
4. Cabin Heat / Air Conditioning	AS REQUIRED
5. DEICER BOOTS	AS REQUIRED
6. LANDING/TAXI Lights	AS REQUIRED
7. Caution Panel	CHECK
8. Engine Instruments	CHECK
9. VENT FAN	OFF
10. Nosewheel	CENTERED
11. AUTOFEATHER	OFF

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CRUISE (R&D)

1. Cruise Power . . . . .SET
2. Altimeters . . . . .SET & CROSS-CHECK
3. LANDING Lights . . . . .AS REQUIRED
4. WING FUEL TANKS . . . . .AS REQUIRED

NOTE

If wing tank fuel is required to complete the flight, wing tank fuel must be used prior to point of no return.

DESCENT (C&R)

1. Landing Data/Approach Briefing . . . . .COMPLETE
2. Ice Protection . . . . .AS REQUIRED
3. Cabin Signs . . . . .AS REQUIRED
4. Altimeters . . . . .SET & CROSS-CHECK
5. FUEL QUANTITY . . . . .CHECK
6. FUEL SELECTOR . . . . .NORMAL
7. WING FUEL TANKS . . . . .OFF

APPROACH PROCEDURES FOR FLIGHT IN ICING CONDITIONS (R&D)

1. DEICER BOOTS . . . . .AUTO & FAST

Before lowering 10° FLAP:

2. CABIN HEAT . . . . .OFF
3. DEICE System . . . . OPERATE CONTINUOUSLY UNTIL LANDING
4. FLAPS . . . . .MAXIMUM 10°
5. Approach Speed . . . . .MAINTAIN V_{REF}

APPROACH PROCEDURES AFTER FLIGHT IN ICING CONDITIONS (R&D)

1. DEICER BOOTS . . . . .AUTO & FAST FOR 3 MINUTES

Above 500' AGL:

2. FLAPS . . . . .AS REQUIRED

If flight controls buffet:

3. FLAPS . . . . .RETRACT TO 10°
4. Speed . . . . .MAINTAIN V_{REF}

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APPROACH (C&R)

1. LANDING Lights . . . . .AS REQUIRED
2. Caution and Advisory Lights . . . . .CHECK
3. Hydraulic Pressures . . . . .CHECK
4. Nosewheel . . . . .CENTERED *
5. V_{REF}/Minimums . . . . .CONFIRMED

LANDING (R&D)

1. FLAPS . . . . .SET *
2. PROP Levers . . . . .MAX RPM *
3. LANDING/TAXI Lights . . . . .ON

Minimum Approach Speeds

94 KIAS	0° FLAP
85 KIAS	10° FLAP

VREF (V_S x 1.3) in KIAS
SFAR 23

Flaps	**12, 300**	**11, 500**	**10, 500**	**9, 500**	**8, 500**
0°	94	90	86	82	77
10°	85	83	79	75	71
20°	80	77	73	70	66
37 ½°	74	70	67	64	60

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AFTER LANDING (S)

1. Ice Protection . . . . AS REQUIRED
2. PITOT HEAT . . . . OFF
3. ANTI COLL Lights (Strobes) . . . . OFF
4. FLAPS . . . . ZERO
5. LANDING Lights . . . . OFF
6. Transponder / TCAS . . . . STANDBY
7. VENT FAN . . . . AS REQUIRED

SHUTDOWN (C&R)

1. Parking Brake . . . . ON
2. AVIONICS MASTER . . . . OFF
3. TAXI LT . . . . OFF
4. BLEED AIR . . . . OFF
5. Standby Horizon . . . . OFF
6. GENERATOR Switches . . . . OFF
7. POWER Levers . . . . IDLE
8. Engine Temperatures . . . . STABLE
9. PROP Levers . . . . FEATHER
   After 5 seconds:
10. FUEL Levers . . . . OFF
11. BOOST Pumps . . . . OFF

LAST FLIGHT (R&D)

1. Interior Lights . . . . OFF
2. Exterior Lights . . . . OFF
3. DC MASTER Switch . . . . OFF
4. EXTERNAL/BATTERY Switch . . . . OFF
5. Control Locks . . . . INSTALLED
6. Tie Downs . . . . AS REQUIRED

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NORMAL EXPANDED PROCEDURES

EXTERIOR CHECK

The pilot should ensure that the following preflight check is done before the first flight of the day, or, if maintenance has been performed, before the next flight.

Conduct a thorough walkaround as detailed below. Visually check the exterior of the airplane for condition, security (particularly access panels), and any sign of damage. Check for any liquids on the ground or on the airplane that may indicate engine, hydraulic, fuel, or battery system failure or malfunction.

Fuel tank contents may be checked using the dipstick (de Havilland part C6G-1088-1). The dipstick must be used before boost pumps are tested or turned on, because fuel levels in all cells must be equal for the dipstick to read accurately. A ladder will be required to check wing tank fuel caps on aircraft equipped with wing fuel tanks.

The most accurate reading of oil can be measured within 10 minutes of engine shutdown. Consult with your maintenance technician for further information about motoring or startup requirements.

The inspection begins at the left cockpit door and proceeds clockwise around the aircraft.

Left Forward Fuselage

1. Left Cockpit Door . . . . .CHECK/UNLOCKED
2. Pitot Heads and Static Vents . . . . .COVERS REMOVED
3. RAM AIR Intake . . . . .CHECK
4. Hydraulic Compartment Door .SECURED
5. Nose Baggage Compartment Door . . . . .SECURED

Nosewheel

1. Tire . . . . .CHECK
2. Shock Strut . . . . .CHECK
3. Torque Link and Connecting Pin . . . . .SECURE
4. Taxi Light . . . . .CHECK

Right Forward Fuselage

1. Radome . . . . .CHECK
2. Pitot Heads and Static Vent . . . . .COVERS REMOVED
3. Right Cockpit Door .CHECK/UNLOCKED
4. Hydraulic Compartment Door .SECURED

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Right Main Gear

1. Tire	CHECK
2. Brake Lines	CHECK FOR LEAKAGE
3. Fairing	CHECK

Right Fuselage

1. Wing Strut	CHECK
2. Right Emergency Exit	SECURE
3. Cabin Windows	CHECK
4. Antennas	CHECK
5. Fuel Drains	DRAIN

Right Inner Wing

1. Leading Edge Access Panel	SECURE
2. Wing and Flap Undersurface	CHECK

Right Engine

1. Propeller Blades, Spinner	CHECK
2. Air Inlet, Air Exit Ducts	CHECK
3. Exhaust Stubs	CHECK
4. Cowling and All Access Panels	SECURE
5. Fire Extinguisher Discs	CHECK
6. Fuel Drains	DRAIN

NOTE

Boost pumps must be selected ON prior to draining fuel from the fuel drains located at the rear of each engine nacelle.

Right Outer Wing

1. Wing and Flap Undersurface	CHECK
2. Deicer Boot	CHECK
3. Landing Light	CHECK
4. Stall Strip and Fence	CHECK
5. Fuel Vent and Lightning Protection Tunnel	CHECK
6. Navigation Light	CHECK
7. Static Wicks and Bonding Straps	CHECK
8. Aileron and Geared Tab	CHECK

Right Aft Fuselage

1. Right Rear Cabin Door	CHECK / UNLOCKED

Empennage

1. Right Vortex Generators . . . . .CHECK
2. Fin Leading Edge . . . . .CHECK
3. Right Horizontal Stabilizer Leading Edge . . . . .CHECK
4. Elevator Flap Interconnect Tab . . . . .CHECK
5. Static Wicks and Bonding Straps . . . . .CHECK
6. Tail Bumper . . . . .CHECK
7. Antennas . . . . .CHECK
8. Rotating Beacon . . . . .CHECK
9. Elevator Trim Tab . . . . .CHECK
10. Left Deicing Boots . . . . .CHECK
11. Left Vortex Generators . . . . .CHECK

Left Aft Fuselage

1. Jury Strut . . . . .AS REQUIRED
2. Baggage Compartment Door . . . . .SECURE
3. External Power Receptacle . . .SECURE OR GPU CONNECTED
4. Aft Fuel Cap . . . . .SECURE

Left Main Gear

1. Tire . . . . .CHECK
2. Brake Lines . . . . .CHECK FOR LEAKAGE
3. Fairing . . . . .CHECK

Left Outer Wing

1. Wing and Flap Undersurface . . . . .CHECK
2. Deicer Boot . . . . .CHECK
3. Landing Light . . . . .CHECK
4. Stall Strip and Fence . . . . .CHECK
5. Stall Warning Vanes . . . . .CHECK
6. Fuel Vent and Lightning Protection Tunnel . . . . .CHECK
7. Navigation Light . . . . .CHECK
8. Static Wicks and Bonding Straps . . . . .CHECK
9. Aileron Gear Tab and Trim Tab .CHECK

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Left Engine

1. Propeller Blades, Spinner . . . . .CHECK
2. Air Inlet, Air Exit Ducts . . . . .CHECK
3. Exhaust Stubs . . . . .CHECK
4. Cowling and All Access Panels .SECURE
5. Fire Extinguisher Discs . . . . .CHECK
6. Fuel Drains . . . . .DRAIN

Left Inner Wing

1. Leading Edge Access Panel . . . . .SECURE
2. Wing and Flap Undersurface . . . . .CHECK

Left Fuselage

1. Wing Strut . . . . .CHECK
2. Left Emergency Exit . . . . .SECURE
3. Cabin Windows . . . . .CHECK
4. Forward Fuel Cap . . . . SECURE

Cabin Interior

1. Fire Extinguisher(s) . . . . .CHARGED AND SECURE
2. First Aid Kit . . . . .SEALED AND SECURE
3. Emergency Exits . . . . .UNOBSTRUCTED/SECURE
4. Cabin Furnishings . . . . .CHECK
5. Passenger Safety Briefing Cards . . . . .CHECK
6. Rear Portion of Double Cabin Door . . .LOCKING PINS SECURE

Night Flights

1. All Interior Lights . . . . .CHECK
2. All Exterior Lights . . . . .CHECK
3. Flashlights . . . . .ON BOARD/CHECK OPERATION

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COCKPIT PREPARATION

NOTE

The Right Seat pilot checks boxed items. If operating single pilot, the pilot checks all items.

NOTE

Ensure prior to applying electrical power to the aircraft that the FIRE PULL handles are pushed in.

1. Safety Equipment . . . . CHECK
2. Control Locks . . . . REMOVE
3. Seats, Harness, and Rudder Pedals . . . . ADJUSTED
4. Circuit Breakers (Main Panel) . . . . CHECK
5. POWER DISTRIBUTION C/B . . . . CHECK
6. GRIMES LIGHT . . . . SET
7. Outside Air Temperature Gauge . . . . CHECK
8. DC MASTER Switch . . . . ON
9. EXTERNAL / BATTERY Switch . . . . AS REQUIRED
10. AVIONICS MASTER . . . . ON
11. START Switch . . . . CENTERED
12. IGNITION Switch . . . . NORMAL
13. Landing Lights . . . . OFF
14. Power Levers . . . . IDLE
15. PROP Levers . . . . FEATHER
16. FUEL Levers . . . . OFF
17. WINDSHIELD WIPER Switch . . . . OFF
18. SLOW / FAST Switch . . . . AS REQUIRED
19. WINDSHIELD HEAT Switch . . . . OFF
20. Friction Knobs (2) . . . . SET
21. Flaps . . . . UP (0°)
22. INVERTER Switch . . . . CHANGE
23. Fuses (L/H Overhead Panel) . . . . SECURE
24. CONSOLE FLAP & TRIM PNL LTS . . . . SET
25. PLT ENG INST & EMER PNL LTS . . . . SET
26. PROP DEICE Switch . . . . OFF
27. INTAKE ANTI - ICE . . . . OFF
28. WING INSP LT . . . . OFF
29. INTAKE DEFLECTOR . . . . OFF
30. VALVE HTR . . . . OFF
31. LEFT STAB / RIGHT STAB Switch . . . . CENTERED
32. WING INNER / WING OUTER Switch . . . . CENTERED
33. SLOW / FAST Switch . . . . AS REQUIRED
34. MANUAL / AUTO Switch . . . . OFF
35. STAB DEICE PRESS Lights . . . . PRESS TO TEST

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36. ENTRANCE Lights	ON
37. READING Lights	AS REQUIRED
38. GENERAL Lights	AS REQUIRED
39. COPLT RADIO & VA PNL LTS	SET
40. Circuit Breakers (R/H Overhead Panel)	CHECK
41. FLT COMPT FAN	OFF
42. ANTI COLL Switch	OFF
43. POSN Switch	OFF
44. NO SMOKING Switch	OFF
45. FASTEN BELTS Switch	OFF
46. FLIGHT COMP Switch	ON
47. BEACON Switch	OFF
48. BLEED AIR Switches	OFF
49. MANUAL COOL / MANUAL WARM Switch	HOLD
50. MANUAL / AUTO Switch	OFF
51. PITOT HEAT Switch	OFF
52. TAXI LT Switch	OFF
53. CAUTION LT Switch	TEST, THEN BRT
54. BUS TIE Switch	NORMAL
55. GENERATOR Switches	OFF
56. AIR CONDITIONING POWER Switch	OFF
57. AIR CONDITIONING OPERATION Switch	NORMAL
58. TEMP CONTROL Dial	SET
59. Trim Panel Light Switch	AS REQUIRED
60. Aileron Trim	CHECK / SET CENTERED
61. Rudder Trim	CHECK / SET FOR T.O.
62. Elevator Trim	CHECK / SET FOR T.O.
63. Steering Tiller	CENTERED
64. CDI/OBS Switches	AS REQUIRED
65. AUTOFEATHER Switch	OFF
66. CLOCK	SET
67. HYD PUMP C/BRK OPEN	LIGHT EXTINGUISHED
68. Airspeed Indicator	ZERO
69. EFIS TEST	TEST
70. EADI / EHSI	NO FLAGS
71. ALTIMETER	SET
72. Terrain Inhibit	OFF
73. DME HOLD	OFF
74. TCAS / VSI	ZERO
75. TCAS / VSI BRT Knob	AS REQUIRED
76. TAWS	TEST, SET AS REQUIRED
77. TURN AND SLIP Indicator	CENTERED
78. FIRE BELL MUTE Switch	DOWN AND GUARDED
79. AUTO FEATH TEST Switch	DOWN AND GUARDED
80. PROP GOV TEST Switch	DOWN AND GUARDED
81. BETA RANGE TEST Switch	OFF

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82. POWER LEV TEST Button . . . . .LIGHT EXTINGUISHED
83. Compass/Gyro Panel . . . . .SET, AS REQUIRED
84. MKR BCN Switch . . . . .AS REQUIRED
85. DME AUDIO . . . . .AS REQUIRED
86. AUDIO Panel . . . . .AS REQUIRED
87. Display Control Panel . . . . SET AS REQUIRED
88. Radar Altimeter . . . . TEST/SET
89. BRAKE HYD PRESSURE . . . . .1200 - 1600 PSI
90. Parking Brake . . . . .SET
91. FLAPS Indicator . . . . .AGREES WITH FLAP POSITION
92. Compass . . . . .CHECK
93. Caution Lights . . . . .CHECK
94. ELT . . . . AUTO
95. FUEL OFF Switches . . . . .NORMAL
96. FIRE PULL Handles . . . . .IN
97. FIRE DETECTION Switch . . . . .TEST
98. Intake Deflector Indicators . . . .AGREE WITH INTAKE POSITION
99. TORQUE PRESS Gauges . . . . .ZERO
100. FUEL FLOW Gauges . . . . .ZERO
101. PROP RPM Gauges . . . . .ZERO
102. OIL TEMP Gauges . . . . .O.A.T.
103. T5 Gauges . . . . .ZERO
104. OIL PRESS Gauges . . . . .ZERO
105. GG RPM Gauges . . . . .ZERO
106. FUEL SYSTEM . . . . .TESTED
107. DC VOLTS & DC LOADS . . . . .CHECK
108. IND SELECT . . . . .BATT
109. EFIS Reversionary Panel .CHECK/SET
110. GNS / ADF Radios . . . . .ON/SET
111. ATC TRANSPONDER . . . . .SET
112. TCAS . . . . TEST/STDBY
113. System Hydraulic PRESS . . . . .1225-1625 PSI
114. PILOT STATIC . . . . .NORM
115. BATTERY TEMPERATURE Gauge . . . . .TEST
116. WING FUEL TANKS Switches . . . . .OFF
117. WING FUEL TANKS Quantity . . . . .CHECK
118. PUMP FAIL Lights . . . . .OFF
119. Pedestal CB / Fuses . . . . .CHECK
120. Avionics Override Switches #1/#2 . . . . .DOWN AND GUARDED
121. VENT FAN . . . . .AS REQUIRED
122. RAM AIR Lever . . . . .AS REQUIRED
123. Right CDI/OBS Switches . . . . .AS REQUIRED
124. Altititude Alerter . . . . .TEST/SET
125. Standby Horizon . . . . .ON
126. Right Airspeed Indicator . . . . .ZERO
127. Right Altimeter . . . . .SET

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128. Right CLOCK . . . . .SET
129. Right TURN AND SLIP . . . . .CENTERED
130. Right TCAS / VSI . . . . .ZERO
131. Right TCAS / VSI BRT Knob . . . . .SET
132. Right RMI . . . . .NO FLAGS
133. Terrain Inhibit Switch . . . . .OFF
134. Right DME HOLD . . . . .OFF
135. Right Compass / Gyro Panel . . . . .SET
136. Right AUDIO Panel . . . . .SET
137. Right Display Control Panel . . . . .SET
138. Flight Director / Autopilot Panel . . . . .TEST LIGHTS
139. Course Heading Panel . . . . .SET
140. AVIONICS MASTER . . . . .OFF
141. Cabin Air Control Valve . . . . .AS REQUIRED

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EXTERNAL POWER START

1. DC MASTER ....ON
2. EXTERNAL/BATTERY ....EXTERNAL
3. DC VOLTS ....CHECK 28V
4. ENGINE START ....COMPLETE

BATTERY START

NOTE

Start both engines on main battery. Recharge between starts should only be attempted if the PF suspects the battery is unable to safely start second engine.

1. DC MASTER ....ON
2. EXTERNAL/BATTERY ....BATTERY
3. DC VOLTS ....SUFFICIENT
4. ENGINE Start ....COMPLETE

ENGINE START

1. Propeller Area ....CLEAR
2. START SWITCH ....L OR R
3. N_G ....STABILIZED ABOVE 12%
4. FUEL LEVER ....ON
5. FUEL FLOW ....MONITOR
6. LIGHTUP ....WITHIN 10 SECONDS
7. N_G, T_5, OIL PRESS ....MONITOR
8. N_G, T_5 ....IDLE & STABLE
9. START Switch ....RELEASE
10. GENERATOR Light ....ON
11. ENGINE Gauges ....NORMAL

BATTERY CHARGING BETWEEN STARTS

1. PROP Lever (operating engine) ....MAX RPM
2. POWER Lever (operating engine) ....IDLE N_G + 15%
3. GENERATOR Switch (operating engine) ....RESET/ON
4. BATTERY LOAD ....WAIT UNTIL 0.4 OR LESS
5. GENERATOR LOAD (operating engine) ....CHECK 0.5 OR LESS
6. POWER Lever ....IDLE
7. GENERATOR Switch ....OFF
8. Start The Other Engine ....COMPLETE

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AUTOFEATHER SYSTEM CHECK

NOTE

For aircraft with the improved autofeather system with the 2 second delay and new autofeather pressure switches.

1. POWER Levers	IDLE
2. OIL PRESS / OIL TEMP	ABOVE 40psi & 10°C
3. PROP Levers	FEATHER, THEN MAX RPM
4. POWER Levers	REVERSE, THEN IDLE
5. AUTOFEATHER Switch	SELECT
6. POWER Levers	ADVANCE TO 30 PSI
7. AUTOFEATHER TEST Switch	TEST, CHECK ARM LIGHT ILLUMINATES
8. LEFT POWER Lever	SHARPLY TO IDLE
9. LEFT PROPELLER	FEATHERS AFTER 2 SECONDS
10. RIGHT POWER Lever	IDLE
11. RIGHT PROPELLER	DOES NOT FEATHER
12. LEFT PROPELLER	UNFEATHERS
13. AUTOFEATHER TEST Switch	OFF
14. POWER Levers	ADVANCE TO 30 PSI
15. AUTOFEATHER TEST Switch	TEST, CHECK ARM LIGHT ILLUMINATES
16. RIGHT POWER Lever	SHARPLY TO IDLE
17. RIGHT PROPELLER	FEATHERS AFTER 2 SECONDS
18. LEFT POWER Lever	IDLE
19. LEFT PROPELLER	DOES NOT FEATHER
20. RIGHT PROPELLER	UNFEATHERS
21. AUTOFEATHER TEST Switch	OFF AND GUARDED
22. POWER Levers	ADVANCE TO 88% N_G
22. ARM LIGHT	CHECK ILLUMINATES
23. LEFT POWER Lever	LESS THAN 88% N_G
24. ARM LIGHT	OUT
25. LEFT POWER Lever	88% N_G
26. RIGHT POWER Lever	LESS THAN 88% N_G
27. ARM LIGHT	OUT
28. POWER Levers	IDLE
29. AUTOFEATHER Switch	AS REQUIRED

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PROPELLER OVERSPEED GOVERNOR CHECK

CAUTION

The PROP GOV TEST switch must not be selected or released while either engine N_G is above idle.

1. POWER Levers ....IDLE
2. PROP Levers...MAX RPM
3. PROP GOV TEST Switch...SELECT
4. POWER Levers ....ADVANCE TO 70% Np
5. TORQUE .... ADD 5 PSI
6. Check that both propellers govern at 70% Np.
7. POWER Levers ....IDLE
8. N_G ....CHECK STABILIZED IDLE
9. PROP GOV TEST Switch ....OFF/GUARDED

BETA BACKUP SYSTEM CHECK

1. POWER Levers ....IDLE
2. PROP Levers...MAX RPM
3. LEFT POWER Lever ....TO REVERSE UNTIL "L RNG" LIGHT ILLUMINATES
4. BETA RANGE TEST Switch...TEST
5. CHECK ...."L RNG" & "BACKUP DISARMED" CYCLES TWICE
6. BETA RANGE TEST Switch..OFF
7. LEFT POWER Lever ....IDLE
8. RIGHT POWER Lever ....TO REVERSE UNTIL "R RNG" LT ILLUMINATES
9. BETA RANGE TEST Switch...TEST
10. CHECK........."R RNG" & "BACKUP DISARMED" CYCLES TWICE
11. BETA RANGE TEST Switch ....OFF
12. RIGHT POWER Levers ....IDLE
13. PWR LEV TEST Button...................................PRESS AND HOLD
14. GREEN LIGHT..ILLUMINATED
15. PWR LEV TEST Button ....RELEASE

RESET PROPS CAUTION LIGHT CHECK

1. PROP Levers...MIN GOV
2. RESET PROP Caution Light...ON
3. PROP Levers...MAX RPM
4. RESET PROP Caution Light..OFF

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BLEED AIR - PNEUMATIC SYSTEM CHECK

NOTE

For aircraft equipped with the 18psi deicing package.

1. Heating System ....OFF
2. POWER Levers ....IDLE N_G + 15%
3. L BLEED AIR Switch ....ON
4. PNEUMATIC LOW PRESS Caution Light ....OUT
5. L BLEED AIR Switch ....OFF
6. PNEUMATIC LOW PRESS Caution Light ....ILLUMINATES
7. R BLEED AIR Switch ....ON
8. PNEUMATIC LOW PRESS Caution Light ....OUT
9. R BLEED AIR Switch ....OFF
10. POWER Levers ....IDLE

INTAKE DEFLECTOR CHECK

1. POWER Levers ....ADVANCE TO 80% N_G
2. INTAKE DEFLECTOR Switch ....EXTEND
3. INTAKE DEFLECTOR Indicators ....EXT

NOTE

Hold switch in EXTEND position for 5 seconds after EXT indication.

4. INTAKE DEFLECTOR Switch....................AS REQUIRED
5. INTAKE DEFLECTOR Indicators....................AS REQUIRED
6. POWER Levers ....IDLE

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BOOST PUMP CHECK

1. Select FWD BOOST and AFT BOOST switches to OFF position. Select STDBY BOOST PUMP EMER FWD and STDBY BOOST PUMP EMER AFT to OFF position. Select the FUEL SELECTOR to the NORMAL position. Check that all four BOOST PRESS caution lights are illuminated.
2. Lift up the STDBY BOOST PUMP EMER FWD switch. Check that the BOOST PUMP 2 FWD PRESS caution light goes out, and the BOOST PUMP 1 FWD PRESS caution light is illuminated. Return the Switch to the OFF position
3. Repeat step 2 for the AFT tank.
4. Press down and hold the FWD BOOST switch. Check that the BOOST PUMP 2 FWD PRESS caution light goes out, and that the BOOST PUMP 1 FWD PRESS caution light is illuminated.
5. Repeat step 4 for the AFT tank.
6. Lift up the FWD and AFT BOOST switches, and check that all four BOOST PUMP PRESS caution lights go out.
7. Turn the FUEL SELECTOR switch to BOTH ON FWD. AFT BOOST PUMP 1 and 2 PRESS lights illuminate, check crossfeed valve indicator indicates OPEN.
8. Repeat step 7 for the AFT tank.
9. Return all switches to OFF and FUEL SELECTOR to NORMAL. Check that all four BOOST PUMP PRESS caution light illuminate and the crossfeed valve indicator indicates CL (closed) .
10. Press FUEL IND test button. FUEL QUANTITY gauges show 0 lbs.
11. FUEL IND test button release. FUEL QUANTITY returns to the correct level.

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AUTOPILOT CHECK

The following should be done before every flight, and prior to each functional check.

1. Check all Circuit Breakers ....IN
2. Check Gyro Attitude Flag..NOT IN VIEW
3. Elevator Trim....................................SET TO TAKE-OFF POSITION
4. Controls ....UNLOCKED

The following functional checks must be made once in each flying day (24 hours).

NOTE

If bus voltage is low, neither the autopilot nor the yaw damper will engage.

With the control column at neutral and autopilot engaged:

1. Autopilot turn knob - rotate left and right, note that the control wheel rotates left and right in response to the input.
2. Vertical Trim Switch - apply nose down and nose up pitch inputs and note the control column move fore and aft in response to switch movement.
3. Control Column - apply and hold forward pressure, note the trim wheel rotates NOSE UP. A pull force should cause the trim wheel to rotate toward NOSE DOWN. The white trim lights should illuminate while the trim is in motion.
4. Rudder Pedals - Apply pressure and note a resistance to the force applied.
5. Note that both the autopilot and yaw damper disengage when the AFCS DISC button on the pilot's control wheel is pressed. Reengage the autopilot and repeat for copilot's control wheel.
6.Press and hold the TEST button on the mode annunciator panel and the note that all annunciators illuminate in bright mode.
7. Move all primary flight controls through full travel to ensure that no restriction exists.
8. Reset elevator trim for take-off.

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DEICE SYSTEM CHECK

1. GENERATOR Switches ....BOTH OFF
2. PITOT HEAT Switch...ON, THEN OFF
   Check for DC LOAD discharge.
3. PROP DEICE Switch...............................ON, OBSERVE CYCLING
4. INTAKE ANTI - ICE Switch ....ON, THEN OFF
   Check for DC LOAD discharge.
5. WING INSPECTION Light...TEST
6. VALVE HEATER Switch ....ON, THEN OFF
   Check for DC LOAD discharge.
7. STAB DEICE PRESS Lights ....PRESS TO TEST
8. WINDSHIELD HEAT Switch.....................................ON, THEN OFF
   Check for DC LOAD discharge.
9. POWER Levers ....75% N_G
10. GENERATOR Switches ....RESET/ON
11. BLEED AIR Switches ....ON
12. DEICER BOOT Switch ....MANUAL
13. WING INNER Switch ....HOLD 5 SECONDS
    Check that ground crew signals boot operation.
14. WING OUTER Switch ....HOLD 5 SECONDS
    . Check that ground crew signals boot operation.
15. LEFT STAB Switch ....HOLD 3 SECONDS
    Check that ground crew signals stabilizer boot operation.
16. RIGHT STAB Switch.......................................HOLD 3 SECONDS
    Check that ground crew signals stabilizer boot operation.

CAUTION

If either light does not come on within 2 seconds, release switch and repeat check. If the check is not satisfactory, a malfunction is indicated and rectification must be carried out before flight in icing contions.

The deice boot indicator lights are operated by pressure switches in the air pressure lines to the deice boots, and do not, therefore positively indicate deicer boot operation.

17. DEICER BOOT Switch ....AUTO
18. SLOW / FAST Switch ....FAST
    Check for correct operation of the deice system, including the STAB DEICE PRESS lights, if installed.

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NOTE

If STAB DEICE PRESS indicator lights are installed, check that each illuminates for at least 1 second in each 60 seconds cycle, and at no time are on simultaneously. If the LEFT indicator does not go out before the RIGHT comes on, a malfunction is indicated and rectification must be carried out before flight in icing conditions.

The following check applies only to aircraft with MOD 6/1874 (Automatic Operation of Horizontal Stabilizer Boots with Flaps Extension) incorporated:

19. DEICER BOOTS ....OFF
20. FLAPS 0º
21. FLAPS 10º

    Check LEFT STAB AND RIGHT STAB DEICE PRESS lights illuminate within a 12 second period in a sequence of left, right, left, right.
22. FLAPS ....GREATER THAN 15º

    Check that same cycle re-occurs.
23. POWER Levers ....IDLE
24. FLAPS ....10°

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SPECIFICATIONS AND LIMITATIONS

CAUTION

Specifications given are for a DHC-6 300 landplane with standard equipment. Modifications, options, and regulatory approvals may result in changes. Speeds given are for aircraft with Mod 6/1291 (Revised Maximum Operating Speed) and Mod 6/1395 (Revised Flaps Extended Speed) incorporated. Check with your maintenance technician if you are unsure of your aircraft modification or option status.

Wingspan . . . . .65 FEET
Height (to top of fin) . . . . .18 FEET 7 INCHES*
Height (to top of fuselage) . . . . .9 FEET 1 INCH*
Turning Radii under power (minimum recommended limits):
  Wing Tip . . . . .48 FEET*
  Nose Wheel . . . . .22 FEET*
  Outer Wheel .20 FEET*
Minimum width of surface for 180º turn . . . . .42 FEET*
Minimum wingtip clearance for 180º turn . . . . .96 FEET*
Engine Model PT6A-27
Propeller Model . . . . .HARTZELL HC B3TN-3D
Propeller Diameter . . . . .8 FEET 6 INCHES
Maximum Takeoff Weight . . . . .12,500 POUNDS
Maximum Landing Weight . . . . .12,300 POUNDS
Floor Loading Limits:
  Main Cabin . . . . .200 lbs/ft^2
  Nose Baggage .100 lbs/ft^2
  Rear Baggage .100 lbs/ft^2
Compartment Limits:
  Nose Baggage (Long Nose) . . . . .300 POUNDS (including radome equipment)
  Rear Baggage . . . . .500 POUNDS (including shelf load)
  Rear Shelf . . . . .150 POUNDS
Main Door Opening Size . . . . .56 x 50 in^2
Design Flight Load Factors:
  Maneuvers . . . .+3.17 TO -1.5 G
  Gusts . . . .+3.19 to -1.63 G
Maximum Operating Altitude . . . . .25,000 FEET
Maximum Altitude for Airstart . . . . .20,000 FEET
  (Demonstrated not a limitation)
Maximum Altitude when using Avgas . . . . .15,000 FEET
  (At sea level ISA + 25º)

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*Figures are approximate and may vary with aircraft load. For additional detail consult the Twin Otter Ground Manual, Publication PSM 1-6-2T.

V_{MO}:	
Sea Level to 6,700 feet	166 KIAS
10,000 feet	156 KIAS
V_A (Sea Level to 18,000 feet)	132 KIAS
V_B (Sea Level to 18,000 feet)	132 KIAS
V_{FE} (Maximum Flaps Extended Speed):	
Flaps 10º	103 KIAS
Flaps 10º-37½º	93 KIAS
V_X (Best Angle of Climb)	FLAPS 0º, 87 KIAS
V_Y (Best Rate of Climb)	FLAPS 0º, 100 KIAS
V_{YSE} (Single Engine Climb Speed)	FLAPS 10º, 80 KIAS
Note: V_{YSE} decreases 4 KIAS/1000lbs.	
V_{MC} (Minimum Control Speed)	FLAPS 10º, 64 KIAS
V_{S1} (Stall Speed Takeoff Configuration)	66 KIAS
V_{SO} (Stall Speed Landing Configuration)	56 KIAS
V_S (Stall Speed Clean)	73 KIAS
Maximum Demonstrated Crosswind Component (not a limitation):	
20 knots at 6 feet, equivalent to 27 knots at 50 feet.	
Fuel Requirement	Jet A, Jet A1, Jet B, JP-4, JP-5, JP-8
AVGAS may be used in emergency. Log it and advise maintenance. Limited to 150 HRS in any overhaul cycle.	
Fuel Capacity (Jet A at ISA):	
FWD TANK	1235 LBS
AFT TANK	1341 LBS
WING TANKS (JP-4 at ISA)	287 LBS EACH
Engine Oil Requirements	ESSO 2380 OR SIMILAR
Check with maintenance to find out what brand of oil should be used on your specific aircraft.	
Hydraulic Fluid Requirements	MIL-H-5606
Tire Pressure (Normal Tires)	NOSE 32 PSI, MAINS 38 PSI

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ENGINE LIMITATION

NOTE

In other than emergency, this chart must not be used for setting power.

Operating Condition	Operating Limits						
Power Setting	SHP	Torque (1) PSI	Maximum Observed ITTº C	N_G (2) % RPM	N_P % RPM	Oil Pressure PSI (3)	Oil Temperature ºC (4)
Take-off Max Cont	620 ISA +18ºC	50	725	101.5	96	80 to 100	10 – 99
Max Climb Max Cruise	620 ISA +6ºC	50	695		96	80 to 100	0 – 99
Idle			660 (5)			40 Min	-40 – 99
Starting			1090 (6)				-40 Min
Acceleration		68.7 (6)	825 (6)	102.6	110		0 – 99
Max Reverse	620	50 (7)	725	101.5	91±1	80 to 100	0 - 99

(1) Maximum permissible sustained torque is 50 psi.
(2) For every 10ºC below –30ºC ambient temperature reduce maximum allowable N_G by 2.2%.
(3) Normal oil pressure is 80 to 100 psi at gas generator speeds above 72% with oil temperature between 60 and 70ºC. Oil pressure below 80 psi is undesirable and should be tolerated only for the completion of flight preferably at reduced power setting. Oil pressure below normal should be reported as an engine discrepancy and should be corrected before next take-off. Oil pressure below 40 psi is unsafe and requires that either the engine be shut down or a landing made as soon as possible, using minimum power required to sustain flight.
(4) For increased service life of the engine (i.e. time between oil changes) an oil temperature between 74 and 80ºC is recommended. A minimum oil temperature of 55ºC is recommended for fuel heater operation at take off power.
(5) At 51% rpm (N_G) minimum, increase N_G as required to stay below idle temperature limits.
(6) These values are time limited to two seconds.
(7) Reverse power is limited to one minute.
(8) Inflight operation of the power levers aft of IDLE is prohibited

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EMERGENCY AND ABNORMAL PROCEDURES

NOTE

Boxed procedures are memory items.

I. IMMEDIATE ACTION - Memory items are boxed and should be completed in as timely a manner as possible consistent with controlling the aircraft on the desired flight path.

Rushing can result in a more serious situation than the emergency or abnormality itself. Memory items must be accomplished with care, and in the case of a two person crew, with coordination between the crewmembers.

In addition to the items listed in the emergency or abnormal procedure, the following steps are part of all emergency or abnormal procedures:

1. Maintain aircraft control.
2. Silence any aural warnings
3. Identify the malfunction.
4. Complete memory items.
5. Execute checklist.
6. Complete all items on the checklist as appropriate, including any Notes, Cautions or Warnings.
7. Communicate with ATC and brief the passengers.

II. SPECIFIC PROCEDURES - It is not possible to develop specific procedures to cover all possible combinations of emergency or abnormal situations. If an emergency or abnormality exists for which these procedures are not adequate or applicable, the pilot's best judgement must prevail.

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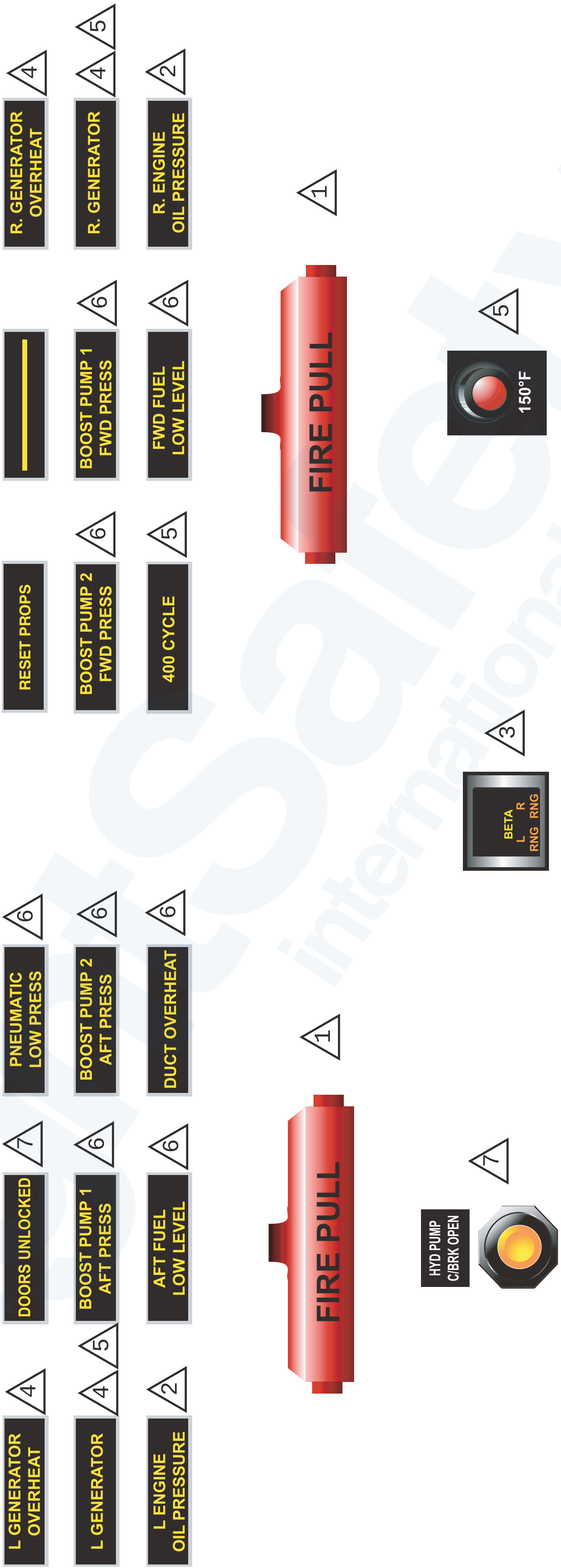

ENGINE / FIRE PROTECTION	ENGINE FIRE ON GROUND POWER LOSS AFTER TAKE-OFF ENGINE FAILURE / FIRE / SHUTDOWN SINGLE ENGINE PROCEDURES	1
	OIL PRESSURE (CAUTION LIGHT) ON ABNORMAL OIL PRESSURE OVERSPEED HIGH T5, HUNG START OR NO LIGHTUP LOW OIL PRESSURE ON START AIRSTART	2
PROPELLER	PRIMARY GOVERNOR FAILURE PROPELLER OVERSPEED INTERMITTENT BETA RANGE LIGHT BETA RANGE LIGHT ILLUMINATES STEADY PROPELLER REVERSAL	3
ELECTRICAL	SUSPECTED ELECTRICAL FIRE TOTAL ELECTRICAL FAILURE GENERATOR OVERHEAT DUAL GENERATOR FAILURE	4
	GENERATOR FAILURE GENERATOR LIGHT FAILS TO COME ON AFTER START OR SHUTDOWN BATTERY OVERHEAT TOTAL INVERTER FAILURE SINGLE INVERTER FAILURE	5
PNEUMATICS / MISCELLANEOUS **FUEL**	UNKNOWN SOURCE OF FIRE OR SMOKE KNOWN SOURCE OF FIRE OR SMOKE BLEED PRESSURE FAILURE DUCT OVERHEAT DOUBLE BOOST PUMP FAILURE (SAME TANK) SINGLE BOOST PUMP FAILURE LOW FUEL LEVEL	6
HYDRAULIC **FLIGHT CONTROLS / FUSELAGE**	HYD C/BRK OPEN LIGHT ON ELECTRIC HYDRAULIC PUMP FAILURE LOSS OF ALL SYSTEM FLUID ELEVATOR CONTROL MALFUNCTION AILERON TRIM TAB RUNAWAY DOORS UNLOCKED (CAUTION LIGHT) ON	7
AVIONICS	ELECTRIC FLIGHT DISPLAY FAILURE DISPLAY CONTROL PANEL (DCP) FAILURE DISPLAY PROCESSOR UNIT (DCU) FAILURE	8

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ENGINE

ENGINE FIRE ON GROUND

1. FIRE BELL . . . . .MUTE
2. PARKING BRAKE . . . . .ON
3. POWER Levers . . . . .BOTH IDLE
4. PROP Levers . . . . .BOTH FEATHER
5. FUEL Levers . . . . .BOTH OFF
6. FUEL OFF Switch (Affected Engine) . . . . .OFF
7. FIRE PULL Handle (Affected Engine) . . . . .PULL
8. BOOST Pumps . . . . .BOTH OFF
9. DC MASTER Switch . . . . .AS REQUIRED
10. Fire Extinguisher . . . . .USE IF NEEDED
11. Evacuate the aircraft.

POWER LOSS AFTER TAKE-OFF (AUTOFEATHER SYSTEM SELECTED ON)

1. POWER . . . . .SET MAX POWER
2. Flaps . . . . .10°
3. Speed . . . .V_2
4. PROPELLER . . . . .CHECK FEATHER

NOTE

At a safe altitude (400 feet minimum), identify cause of power loss and complete appropriate checklist.

ENGINE FAILURE / ENGINE FIRE / SHUTDOWN

1. POWER (Operating Engine) . . . . .AS REQUIRED
2. ENGINE FIRE INSTRUCTIONS (Affected Engine) . . .COMPLETE,
T HANDLE AS REQUIRED

3. Single Engine Procedures Checklist (page E-2) . . . . . .COMPLETE

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SINGLE ENGINE PROCEDURES

SINGLE ENGINE CLIMB

1. FLAPS 10º
2. Max Power . . . . SET
3. Nosewheel . . . . CENTERED
4. Cabin Signs . . . . ON
5. Cabin Heat / Air Conditioning . . . . OFF
6. Ice Protection . . . . AS REQUIRED
7. LANDING/TAXI Lights . . . . AS REQUIRED
8. BLEED AIR Switch (Affected Engine) . . . . OFF
9. GENERATOR Switch (Affected Engine) . . . . OFF
10. Electrical Load . . . . CHECK
11. Engine Instruments . . . . CHECK
12. Caution Panel . . . . CHECK
13. Autofeather . . . . OFF
14. VENT FAN . . . . OFF

SINGLE ENGINE CRUISE

1. Power . . . . AS REQUIRED
2. FLAPS . . . . ZERO
3. Altimeters . . . . SET & CROSSCHECK
4. Fuel Crossfeed . . . . AS REQUIRED
5. WING FUEL TANKS . . . . AS REQUIRED
6. Cabin Signs . . . . ON
7. Landing Lights . . . . AS REQUIRED
8. Bleed Air (Affected Engine) . . . . OFF
9. Generator (Affected Engine) . . . . OFF
10. Electrical Load . . . . CHECK
11. Cabin Heat / Air Conditioning . . . . OFF

SINGLE ENGINE APPROACH AND LANDING

For immediate return complete items marked with *.

1. Hydraulic Pressures . . . . CHECK*
2. Caution and Advisory Lights . . . . CHECK
3. LANDING Lights . . . . AS REQUIRED
4. Approach Briefing / Landing Data . . . . COMPLETED*
5. V_{REF}/ Minimums . . . . CONFIRMED*
6. Nosewheel . . . . CENTERED*
7. FLAPS . . . . 10º *

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OIL PRESSURE (CAUTION LIGHT) ON

L ENGINE OIL PRESSURE OR R ENGINE OIL PRESSURE

1. OIL PRESS Gauge . . . . .CHECK PRESSURE

If oil pressure gauge indicates below 40 psi:

2. SHUTDOWN (Affected Engine) . . . . .COMPLETE

ABNORMAL OIL PRESSURE

Oil pressure less than 80 psi at or above 85% N_G:

1. Power Lever (Affected Engine) . . . .REDUCE TO BELOW 75% N_G

If Oil pressure is less than 40 psi:

2. SHUTDOWN (Affected Engine) . . . . .COMPLETE

OVERSPEED
(GREATER than 101.5% Ng)

If the gas generator rpm exceeds the maximum limit:

1. SHUTDOWN (Affected Engine) . . . . .COMPLETE

ABNORMAL ENGINE STARTS

HIGH T_5, HUNG START, or NO LIGHTUP ON START

1. FUEL Lever (Affected Engine) . . . . .OFF
2. START Switch (Affected Engine) . . . . . . .HOLD ON 10 SECONDS

LOW OIL PRESSURE ON START

1. FUEL Lever (Affected Engine) . . . . .OFF
2. START Switch . . . . .OFF

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AIRSTART

1. FUEL Lever (Affected Engine) . . . . .OFF
2. PROP Lever (Affected Engine) .FEATHER
3. POWER Lever (Affected Engine) . . . . .IDLE
4. FUEL OFF Switch (Affected Engine) . . . . .NORMAL
5. Boost Pump (Affected Engine) . . . . .ON
6. GENERATOR Switch (Affected Engine) . . . . .OFF
7. INVERTER Switch . . . . .SET TO #2
8. AVIONICS OVERRIDE . . . .#2 ON

NOTE

With #2 AVIONICS OVERRIDE used, ATC must be advised prior to continuing with this checklist. There is no transponder when using #2 AVIONICS OVERRIDE with the AVIONICS MASTER OFF.

The pilot and co-pilot cannot communicate through the intercom when using an avioncs overide for one side only, with the AVIONICS MASTER OFF.

9. AVIONICS MASTER . . . . .OFF
10. IGNITION Switch . . . . .NORMAL
11. ENG IGNITER Switch (Affected Engine) . . . . .BOTH

NOTE

Selecting ENG IGNITER switch to BOTH is not applicable with Mod 6/1912 or S.O.O. 6180 incorporated.

12. START . . . . .COMPLETE

After relight:

13. PROP Lever (Affected Engine) . . . . .MIN GOV, THEN
SET AS REQUIRED
14. Power Lever (Affected Engine) . . . . .AS REQUIRED
15. GENERATOR Switch (Affected Engine) . . . . .RESET/ON
16. BLEED AIR Switch (Affected Engine) . . . . .AS REQUIRED
17. Flaps . . . . .AS REQUIRED
18. AVIONICS MASTER . . . . .ON
19. AVIONICS OVERRIDE . . . . .BOTH OFF
20. INVERTER Switch . . . . .AS REQUIRED

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PROPELLER

PROPELLER OVERSPEED

1. PROP Levers . . . . .MAX RPM

If propeller maintains 101% Np:

1. Continue Flight Using Overspeed Governor.
2. Land as soon as possible.

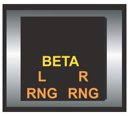
If propeller is greater than 101.5% Np:

1. Power Lever (Affected Engine) . . . . .IDLE
2. Reduce Speed To . . . . .NOT BELOW 1.3 X V_S
3. PROP Lever (Affected Engine) . . . . .FEATHER

If propeller does not feather:

4. DO NOT shut down the engine. Continue flight at minimum safe air speed and minimum safe altitude.
5. Land as soon as possible.

INTERMITTENT BETA RANGE LIGHT



NOTE

An intermittent BETA RANGE light indicates that the Beta backup system is preventing the propeller from going into reverse, which may result in a light buffet, controllable yaw, and bank toward the affected propeller.

WARNING

DO NOT twist the power lever handgrips or pull the BETA SYS circuit breaker, as either of these actions will result in an UNCOMMANDED REVERSE.

1. PROP Levers . . . . .MIN GOV (until landing)
2. POWER Levers . . . . .ADVANCE TO MINIMIZE BUFFET
3. Land as soon as possible. (During approach, maintain symmetric torque on both engines to touchdown).

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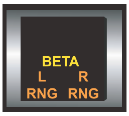
BETA RANGE LIGHT ILLUMINATES STEADY



NOTE

Steady illumination of the BETA RANGE light will result in an increase in torque and a decrease in N_P as the propeller feathers.

1. Confirm that the beta light is steadily illuminated and not cycling slowly
2. Power Lever (Affected Engine) . . . . .RETARD TO IDLE
3. Propeller Lever (Affected Engine) . . . . .FEATHER
4. BETA SYS Circuit Breaker (Main Panel) . . . . .PULL
5. PROP Lever (Affected Engine) . . . . .MIN GOV, THEN SET AS REQ'D
6. POWER Lever (Affected Engine) . . . . .AS REQUIRED

NOTE

Normal power may be used (Affected Engine) to complete the flight. (The Beta backup system will be inoperative)

PROPELLER REVERSAL

CAUTION

This procedure does not apply to aircraft which have incorporated Mod 6/1303 (Propeller Blade Latches). Do not feather or shut down an engine with a reversed propeller that is fitted with Blade Latches.

1. SHUTDOWN (Affected Engine) . . . . .COMPLETE

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ELECTRICAL

SUSPECTED ELECTRICAL FIRE

1. INVERTER Switch . . . . .NUMBER 1
2. BUS TIE . . . . .OPEN
3. Right GENERATOR Switch . . . . .OFF

Wait up to one minute, if smoke does not decrease:

4. Right GENERATOR Switch . . . . .RESET/ON
5. INVERTER Switch . . . . .NUMBER 2
6. Left GENERATOR Switch . . . . .OFF
7. EXTERNAL/BATTERY Switch . . . . .OFF

Wait up to one minute, if smoke does not decrease:

8. EXTERNAL/BATTERY Switch . . . . .BATTERY
9. Left GENERATOR Switch . . . . .RESET/ON
10. Land as soon as possible.

TOTAL ELECTRICAL FAILURE

1. BUS TIE Switch . . . . .OPEN
2. LEFT and RIGHT GENERATOR Switches . . . . .OFF
3. LEFT GENERATOR Switch . . . . .RESET (MAX 2 ATTEMPTS)
4. RIGHT GENERATOR Switch . . . . . . .RESET (MAX 2 ATTEMPTS)
5. DC LOAD . . . . . . .CHECK, CONFIRM OPERATING GENERATOR
6. INVERTER . . . . .SELECT OPERATING SIDE
7. GENERATOR Switch (Malfunctioning System) . . . . .OFF
8. BUS TIE Switch . . . . .AS REQUIRED

NOTE

If both generators reset, consider leaving the BUS TIE switch OPEN.

9. Reverse Current Circuit Breaker (PRE MOD 6/1651)RESET IF NECESSARY
10. Unnecessary Electricals . . . . .OFF
11. Land as soon as possible.

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GENERATOR OVERHEAT

L GENERATOR OVERHEAT

OR

R GENERATOR OVERHEAT

1. GENERATOR Switch (Affected Engine) . . . . .OFF
2. Timer . . . . .START
3. DC LOAD . . . . . . .CHECK LOAD ON REMAINING GENERATOR
4. DO NOT reset failed generator.

If GENERATOR OVERHEAT light does not go out within three minutes:

5. SHUTDOWN (Affected Engine) . . . . .COMPLETE

DUAL GENERATOR FAILURE

L GENERATOR

AND

R GENERATOR

NOTE

Do not hold the generator switch in the RESET position, and do not make more than two attempts to reset the generator. The GEN RESET circuit breaker is located in the engine nacelle and cannot be reset in flight.

1. INVERTER Switch . . . . .SELECT NUMBER 1
2. BUS TIE Switch . . . . .OPEN
3. LEFT and RIGHT GENERATOR Switches . . . . .OFF
4. LEFT GENERATOR Switch . . . . .RESET (MAX 2 ATTEMPTS)
5. DC LOAD . . . . .CHECK
6. RIGHT GENERATOR Switch . . . . . . .RESET (MAX 2 ATTEMPTS)
7. DC LOAD . . . . .CHECK
8. GENERATOR Switch (Malfunctioning System) . . . . .OFF

NOTE

If both generators reset consider leaving the BUS TIE switch OPEN.

9. BUS TIE Switch . . . . .NORMAL
10. Unnecessary Electricals . . . . .OFF

NOTE

If unable to reset either generator land as soon as possible.

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GENERATOR FAILURE

L GENERATOR

OR

R GENERATOR

NOTE

Do not hold the generator switch in the RESET position, and do not make more than two attempts to reset the generator. The GEN RESET circuit breaker is located in the engine nacelle and cannot be reset in flight.

1. GENERATOR Switch (Affected Engine) . . . . .OFF
2. GENERATOR Switch (Affected Engine) . . . . .RESET
3. GENERATOR Light (Affected Engine) . . . . .CHECK LIGHT IS OUT

If generator does not reset:

4. INVERTER Switch . . . . .SELECT NUMBER 1
5. BUS TIE Switch . . . . .OPEN
6. GENERATOR Switch (Affected Engine) . . . . .OFF
7. GENERATOR Switch (Affected Engine) . . . . .RESET
8. GENERATOR Light (Affected Engine) . . . . .CHECK LIGHT IS OUT
9. DC LOAD . . . . .CHECK GENERATOR LOAD

If generator still fails to reset:

10. GENERATOR Switch (Affected Engine) . . . . .OFF
11. BUS TIE Switch . . . . .NORMAL
12. DC LOAD . . . . .CHECK GENERATOR LOAD
13. Unnecessary Electricals . . . . .OFF

GENERATOR LIGHT FAILS TO ILLUMINATE AFTER START OR SHUTDOWN

NOTE

On ground procedure only

1. EXTERNAL/BATTERY Switch . . . . .OFF
2. Shut down engines.

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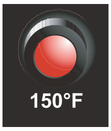
BATTERY OVERHEAT



1. EXTERNAL / BATTERY Switch . . . . .OFF
2. Battery Temperature . . . . .MONITOR

If temperature continues to rise:

3. Land as soon as possible.
4. Evacuate aircraft after landing.

If temperature declines:

5. Leave EXTERNAL / BATTERY Switch off.
6. Land as soon as practical.

TOTAL INVERTER FAILURE

1. WINDSHIELD HEAT Switch . . . . .OFF
2. Continue navigation using DC Instruments, Standby Attitude Indicator and Standby Compass.
3. Note time of failure and fuel remaining.

NOTE

Commonly the following instruments will be lost:

- Pilot and Co-pilot Attitude Indicator
- RMI, HSI, and ADF
- Torque gauges, Oil Pressure gauges
- Fuel Flow gauges & Fuel Quantity gauges.

SINGLE INVERTER FAILURE

400 CYCLE

1. INVERTER Switch . . . . .SELECT OTHER INVERTER
2. 400 CYCLE Light . . . . .CHECK LIGHT IS OUT

If AC Power is not available:

3. TOTAL INVERTER FAILURE CHECKLIST . . . . .COMPLETE

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PNEUMATICS / MISCELLANEOUS

UNKNOWN SOURCE OF FIRE OR SMOKE

1. Be prepared to land as soon as possible.

If Bleed air is not required:

2. BLEED Switches . . . . .BOTH OFF

If Bleed air is required:

3. LEFT BLEED Switch . . . . .OFF

Wait up to one minute, if no improvement:

4. LEFT BLEED Switch . . . . .ON
5. RIGHT BLEED Switch . . . . .OFF

Wait up to one minute, if no improvement:

6. RIGHT BLEED Switch . . . . .ON
7. Land as soon as possible.

KNOWN SOURCE OF FIRE OR SMOKE

NOTE

Whether or not smoke has dissipated, if it cannot be visibly confirmed that the fire has extinguished, land as soon as possible.

1. Land as soon as possible.
2. If required move passengers from the affected area.
3. Extinguish fire with fire extinguisher(s).
4. Smoke clearing may be enhanced by opening the access to the baggage compartment.

BLEED PRESSURE FAILURE

PNEUMATIC LOW PRESS

1. BLEED AIR Switches . . . . .BOTH ON
2. POWER Levers .GREATER THAN 70%N_G

If bleed pressure does not increase:

3. Bleed operated systems . . . . .OFF
4. BLEED AIR Switches . . . . .OFF
5. Avoid icing conditions.

DUCT OVERHEAT

DUCT OVERHEAT

1. RAM AIR Lever . . . . .OPEN
2. TEMP CONTROL . . . . .REDUCE TEMPERATURE

If on ground:

3. VENT FAN . . . . .ON

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FUEL

DOUBLE BOOST PUMP FAILURE SAME TANK

BOOST PUMP 1 AFT PRESS AND **BOOST PUMP 2 AFT PRESS**

OR

BOOST PUMP 1 FWD PRESS AND **BOOST PUMP 2 FWD PRESS**

1. STDBY BOOST PUMP EMER Switch . . . . .ON

If failed BOOST PUMP 2 caution light extinguishes:

2. CB Failed Pump Number 1 (Main Panel) . . . . .PULL

If failed BOOST PUMP 2 caution light is still on:

3. FUEL SELECTOR Switch . . . .CROSSFEED FROM OTHER TANK
4. CB Failed Pumps Number 1 and 2 (Main Panel) . . . . .PULL

NOTE

Above 10,000 feet flameout is possible if boost pump pressure is lost to the engine.

SINGLE BOOST PUMP FAILURE

BOOST PUMP 1 FWD PRESS OR **BOOST PUMP 1 AFT PRESS**

1. CB Failed Pump Number 1 (Main Panel) . . . . .PULL

LOW FUEL LEVEL

AFT FUEL LOW LEVEL OR **FWD FUEL LOW LEVEL**

1. Fuel Quantity Indicator (Affected Side) . . . . .CHECK

If fuel quantity is showing less than 330 LBS:

2. Switch the FUEL SELECTOR Switch to the operating side.
3. Land as soon as possible.

If fuel quantity is showing more than 330 LBS:

4. Avoid extreme attitudes.
5. Consider switching the FUEL SELECTOR Switch to the operating side.
6. Land as soon as practical.

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HYDRAULIC

HYD PUMP C/BRK OPEN LIGHT ON

1. HYD OIL PUMP C/B (Main Panel) . . . . .CHECK, DO NOT RESET
2. HYDRAULIC PUMP FAILURE CHECKLIST . . . . .COMPLETE

ELECTRIC HYDRAULIC PUMP FAILURE

1. HANDPUMP . . . . .USE 30 - 40 STROKES
2. BRAKE HYD PRESS/ System HYD PRESSMAINTAIN ABOVE 1500PSI

LOSS OF ALL SYSTEM FLUID / FLUID LEAK

1. HYD OIL PUMP C/B (Main Panel) . . . . .PULL
2. ZERO FLAP LANDING . . . . .COMPLETE

NOTE

Services lost without hydraulic pressure:

- Flaps
- Nosewheel Steering
- Possibly Brakes

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FLIGHT CONTROLS / FUSELAGE

ELEVATOR CONTROL MALFUNCTION

If movement of the control column does not produce a corresponding change in pitch attitude, longitudinal control can be managed by using the elevator trim. Engine power should be used to assist in controlling vertical speed and airspeed.

WARNING

Airplane longitudinal response to elevator trim control and power changes will be reduced. Avoid large and rapid changes in trim or power.

AILERON TRIM TAB RUNAWAY

1. If necessary reduce speed to relieve control forces.

If trim tab can be operated by pressing switch:

2. Aileron Trim Switch . . . . . .PRESS IN APPROPRIATE DIRECTION

As the trim tab reaches the neutral position:

3. AIL TRIM ACT CB (Main Panel) . . . . .PULL

DOORS UNLOCKED (CAUTION LIGHT) ON

1. SEAT BELT Switch . . . . .ON
2. Do not attempt to secure doors.
3. Land as soon as practical.

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AVIONICS

ELECTRONIC FLIGHT DISPLAY FAILURE

1. AFFECTED side EFIS COMP Switch.SELECT OPERATING SIDE.

NOTE

A composite image will be presented on the operating display.

DISPLAY CONTROL PANEL (DCP) FAILURE

1. EFIS TFR Switch................................SELECT OPERATING SIDE.

NOTE

Affected side EFIS display is controlled by operating side.

DISPLAY PROCESSOR UNIT (DPU) FAILURE

1. EFIS TFR Switch...............................SELECT OPERATING SIDE.

NOTE

Affected side EFIS display is controlled by operating side.

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PERFORMANCE

TAKEOFF TOTAL DISTANCE TO 50 FEET P-1

ACCELERATE-STOP DISTANCE (TO 35 KNOTS) P-2

TAKEOFF DISTANCE TO 35 FEET
(ONE ENGINE INOPERATIVE AT V_{EF}) .P-3

TAKEOFF GRADIENT OF CLIMB -
ONE ENGINE INOPERATIVE P-4

ENROUTE RATE OF CLIMB -
ONE ENGINE INOPERATIVE P-5

NAUTICAL AIR MILES PER POUND OF FUEL -
ONE ENGINE INOPERATIVE P-6

ABSOLUTE AND SERVICE CEILING -
ONE ENGINE AT MAXIMUM CONTINUOUS POWER P-7

FUEL CONSUMPTION AT MAXIMUM ENDURANCE
(HOLDING) SPEED P-8

LANDING DISTANCE TABLE
(FROM 50 FEET TO STOP) P-9

TAKE OFF POWER SETTING P-10

NOTE

Most Performance Data in this section is taken from Supplement 11 to the Flight Manual “Special Federal Air Regulation 23 Compliance.”

For CAR 3 Data, consult the Flight Manual (PSM-1-63-1A).

All graphs are suitable for a series 300 landplane with standard wheel gear only, and assume new engines and skilled pilot technique. No factors have been applied.

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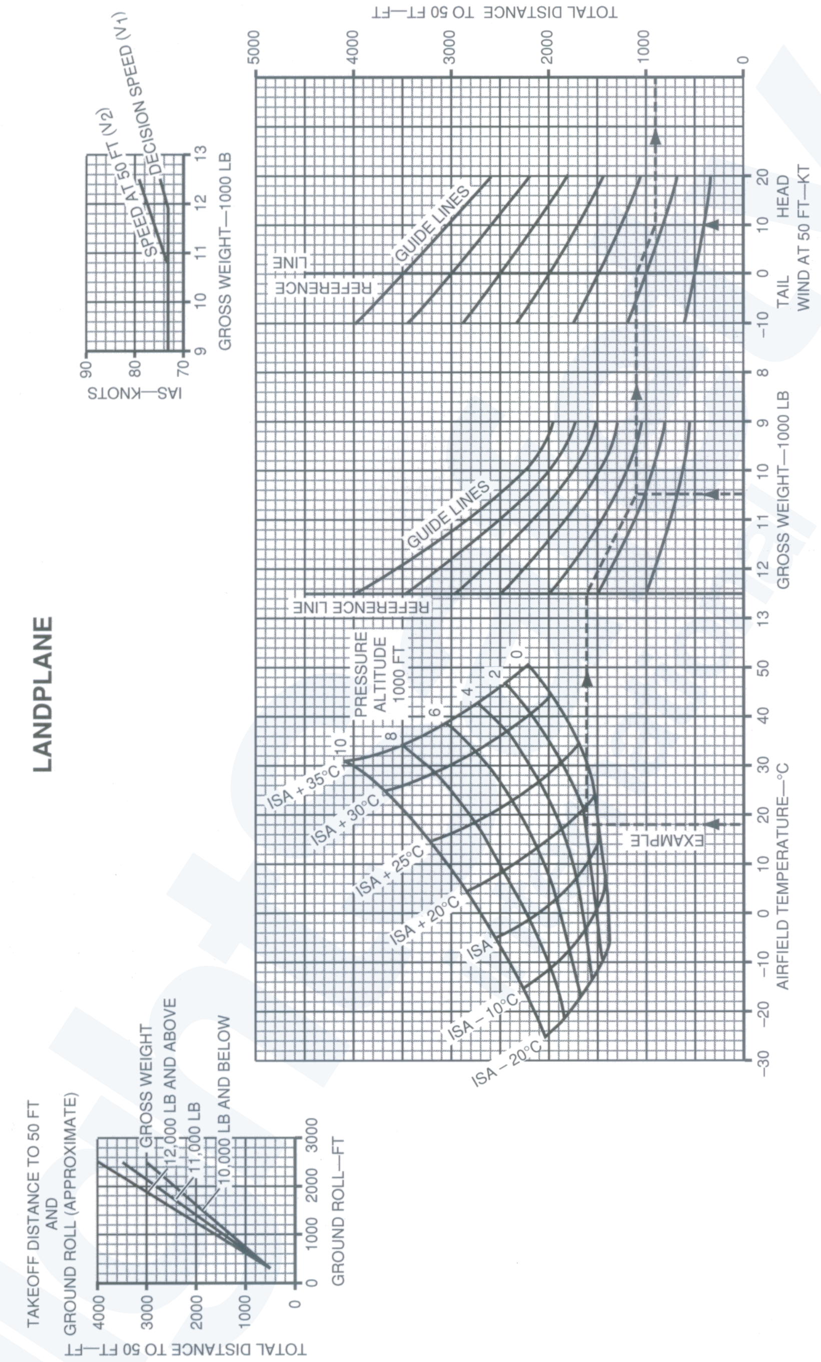
TAKE-OFF TOTAL DISTANCE TO 50 FEET



Associated Conditions:

Flaps:	10°
Intake Deflectors:	Retracted
Engines:	Both set at takeoff power before brake release.
Speeds:	See chart inset
Runway:	Dry, hard, level surface

NOTE

Distances are calculated for actual winds.
With intake deflectors extended, the take-off distance required is increased by 2.5%, when engine torque is less than 50 psi.

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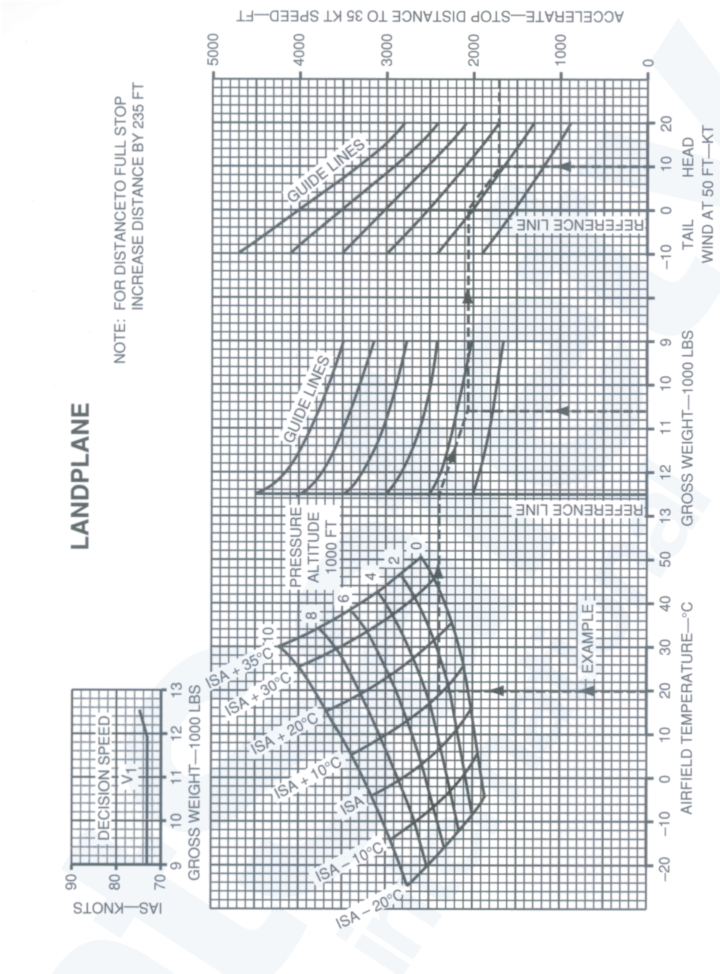
ACCELERATE-STOP DISTANCE (TO 35 KNOTS)



NOTE: FOR DISTANCETO FULL STOP INCREASE DISTANCE BY 235 FT

Associated Conditions:

Flaps:	10°
Intake Deflectors:	Retracted
Engines:	Both at takeoff power before brake release, and up to engine failure speed. Critical engine failed at this speed, prop feathered, remaining engine at idle.
Speeds:	See chart inset
Retardation:	Wheel brakes only
Runway:	Dry, hard, level surface

NOTE

Distances are calculated for actual winds.
With intake deflectors extended, the accelerate-stop distance is increased by 1%, when engine torque is less than 50 psi.

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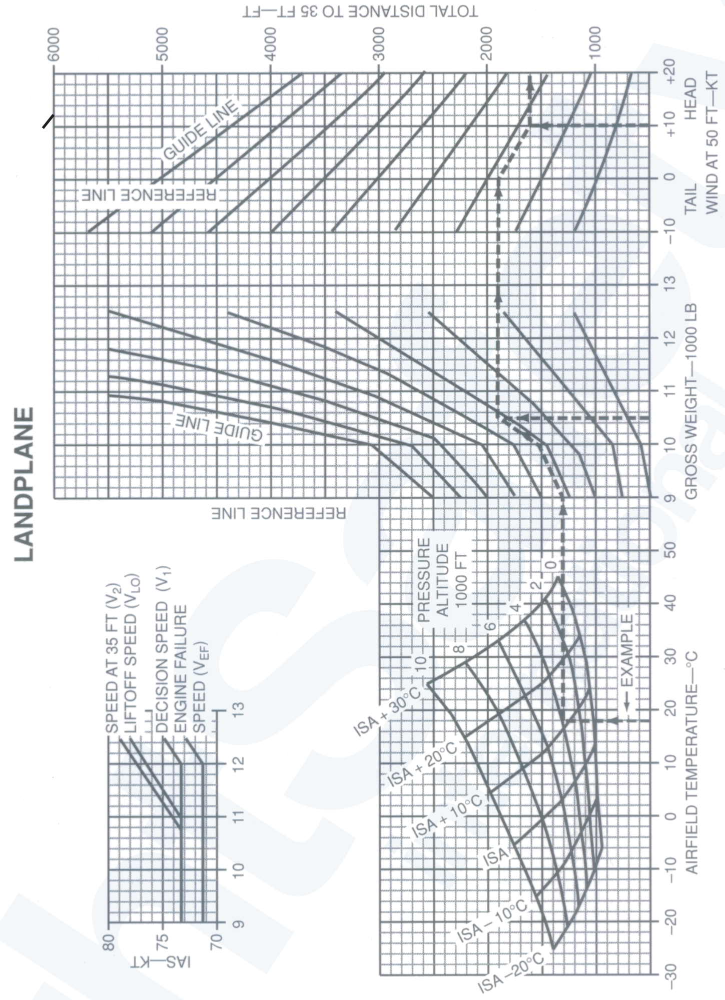
TAKEOFF DISTANCE TO 35 FEET (ONE ENGINE INOPERATIVE AT V_{EF})



Associated Conditions:

Data basis:	Estimated
Flaps:	10°
Intake Deflectors:	Retracted
Engines:	Both set at takeoff power (prop rpm 96%) to engine failure speed after which one engine inoperative—prop feathered
Speeds:	See chart insets.
Runway:	Dry, hard, level surface.

NOTE

The distances are calculated for actual winds.

For 50 ft obstacle multiply distance to 35 ft by 1.17

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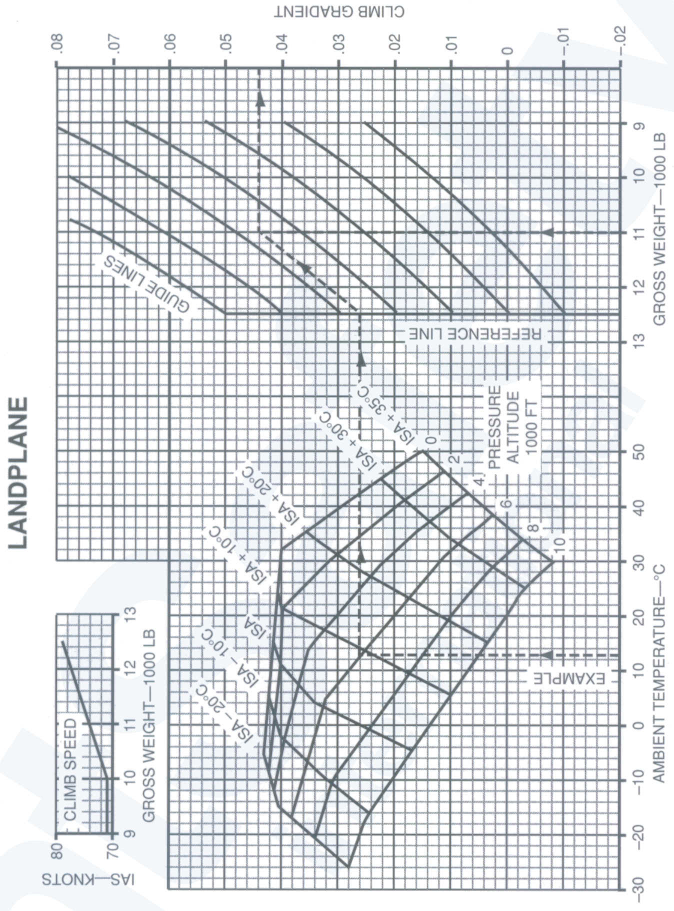
TAKEOFF GRADIENT OF CLIMB - ONE ENGINE INOPERATIVE



Associated Conditions:

Flaps:	10°
Intake Deflectors:	Retracted
Engines:	One engine inoperative, propeller feathered. Other engine at takeoff power, (prop rpm 96%). Use Torque Computer
Speeds:	See chart insets

NOTE

With intake deflectors extended, reduce rate of climb by 15 ft/min and gradient of climb by 0.002 when engine torque is less than 50 psi.

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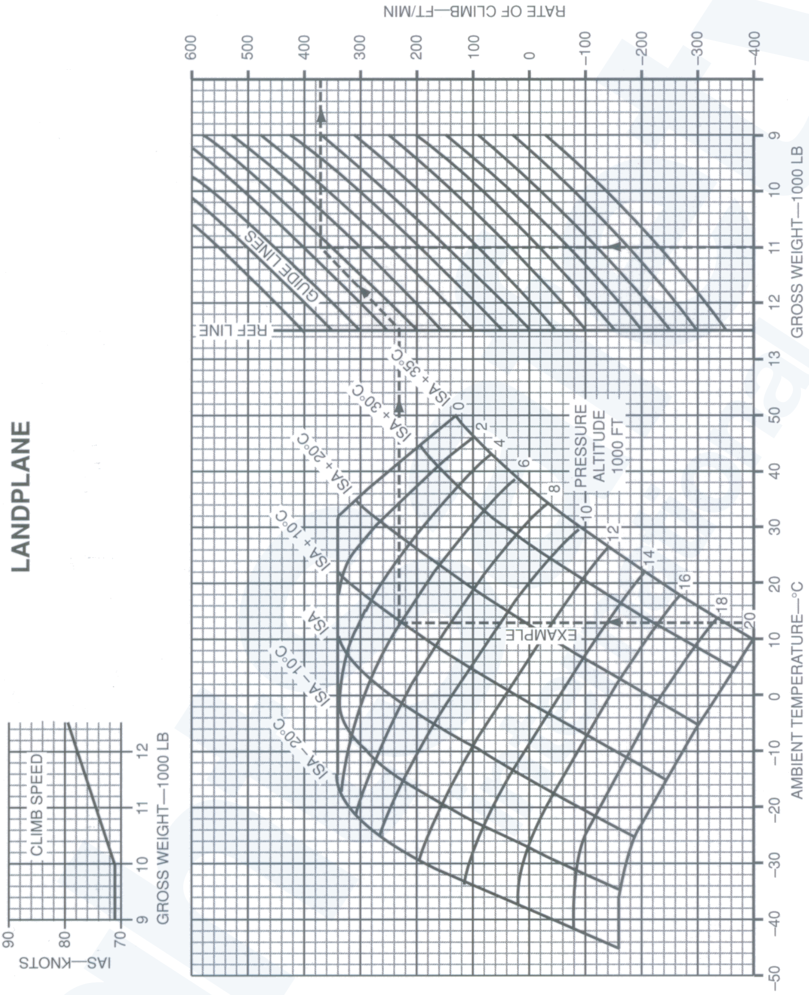
ENROUTE RATE OF CLIMB - ONE ENGINE INOPERATIVE



Associated Conditions:

Flaps:	10°
Intake Deflectors:	Retracted
Engines:	One engine inoperative, propeller feathered. Other engine at maximum continuous power, propeller RPM 96%.
Speed:	See chart inset

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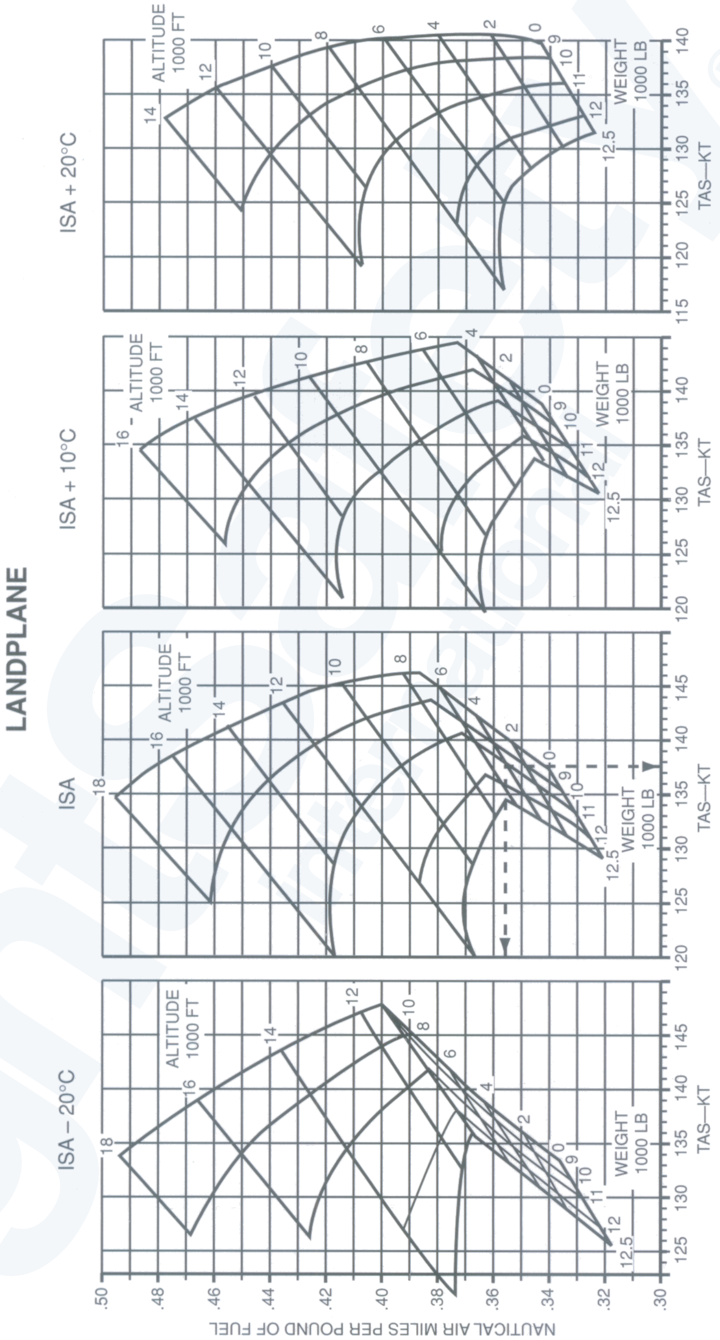
NAUTICAL AIR MILES PER POUND OF FUEL - ONE ENGINE INOPERATIVE



Associated Conditions:

Intake Deflectors: Retracted

Engines: One engine at maximum continuous power

Engine Bleed: Off

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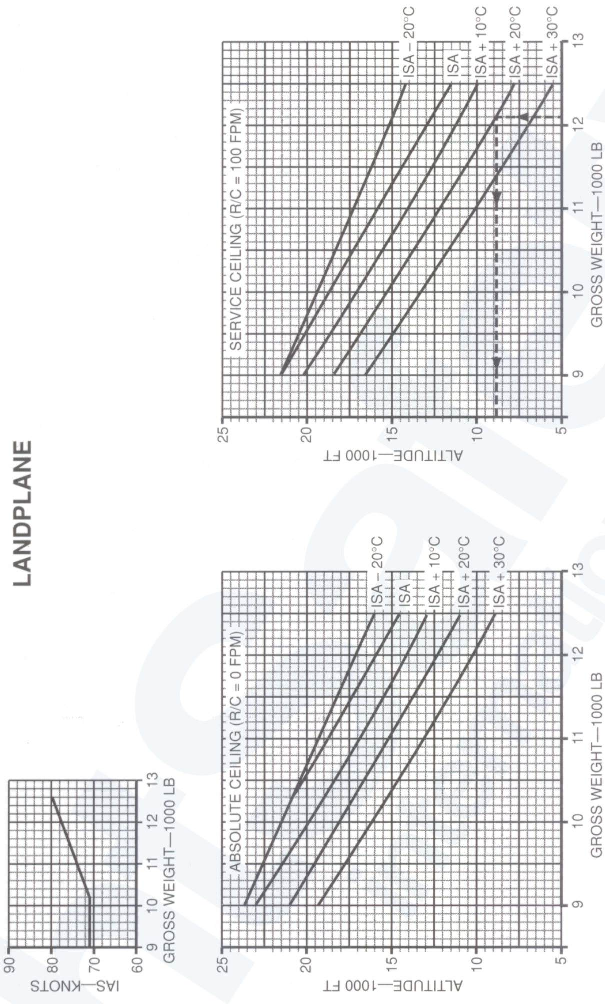
ABSOLUTE AND SERVICE CEILING - ONE ENGINE AT MAXIMUM CONTINUOUS POWER



Associated Conditions:

Flaps: 10°

Intake Deflectors: Retracted

Engines: One engine inoperative, propeller feathered. Other engine at maximum continuous power

Engine Bleed: Off

Speed: See chart insets

NOTE

With intake deflectors extended, reduce ceiling by 400 ft.

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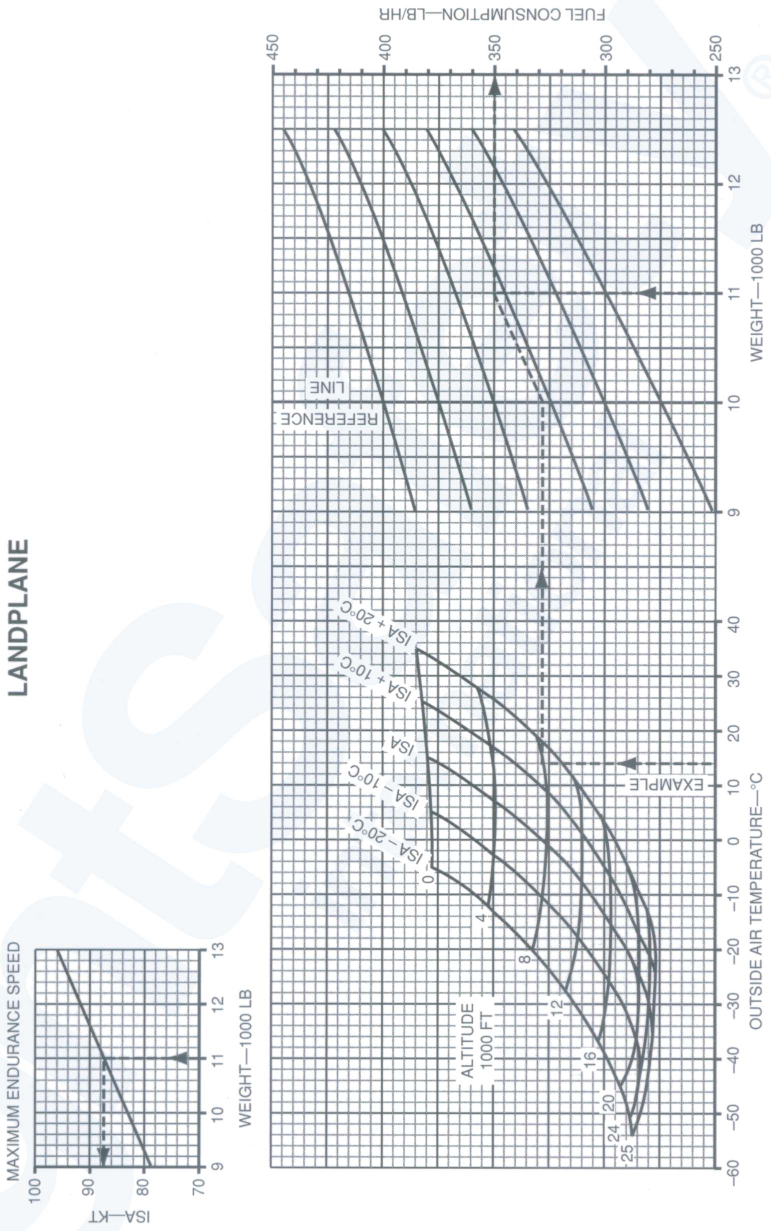
FUEL CONSUMPTION AT MAXIMUM ENDURANCE (HOLDING) SPEED



Associated Conditions:

Intake Deflectors: Retracted

Engines: Both engines operating

Engine Bleed: Off

NOTE

It is recommended that 75% prop RPM be used for the maximum endurance condition.

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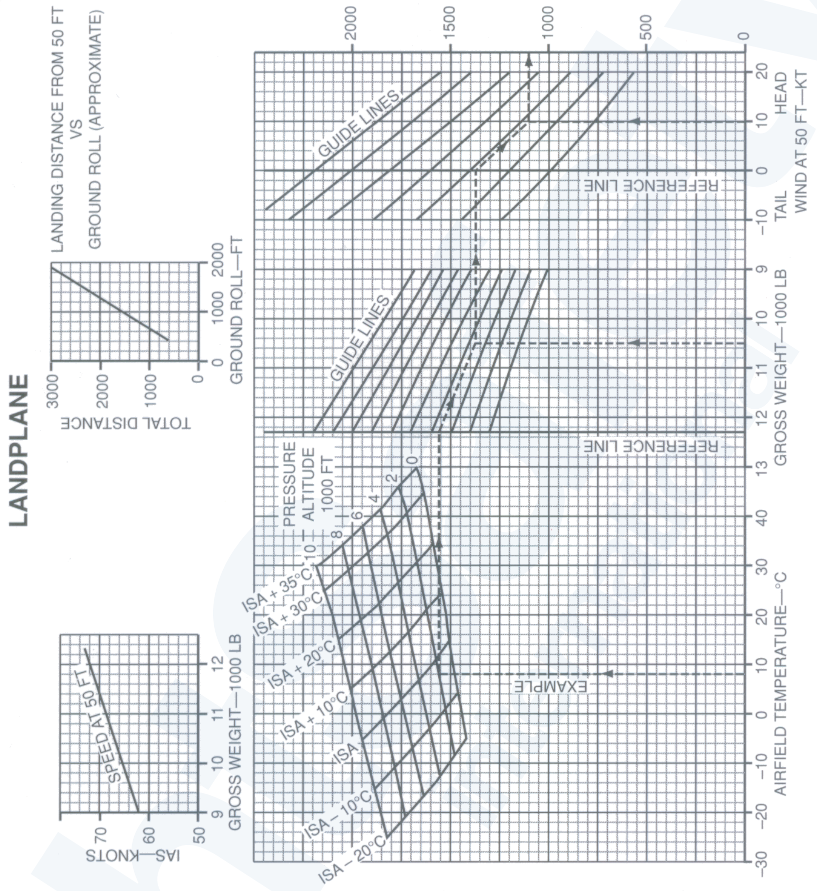
LANDING DISTANCE TABLE (FROM 50 FEET TO STOP)



Associated Conditions:

Flaps:	37 ½°
Intake Deflectors:	Retracted or extended
Engines:	Power to maintain 3° approach to 50 feet, then idle
Speed:	See chart inset
Retardation:	Wheel brakes only
Runway:	Dry, hard, level surface

NOTE

For landing with flaps 20°, multiply distance shown by 1.3.

For landing with flaps 10°, multiply distance shown by 1.5.

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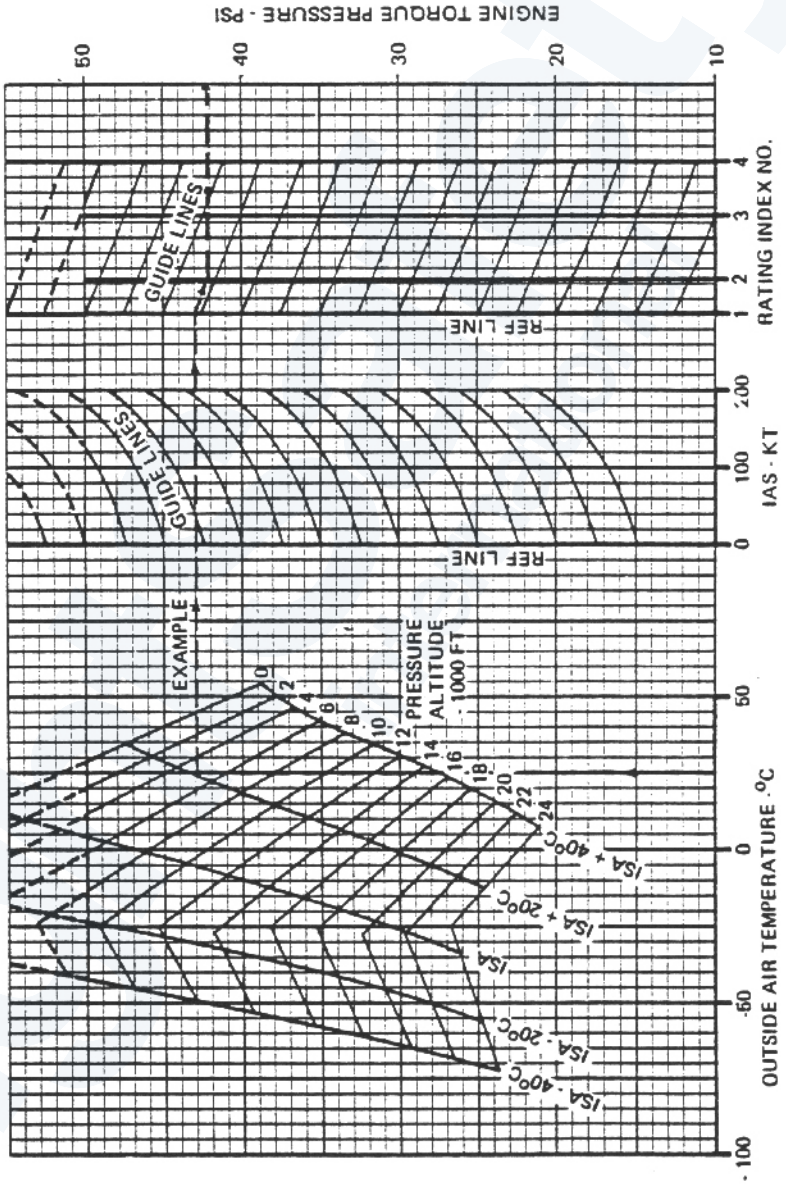
TAKE-OFF POWER SETTING

Rating Index:

1. INTAKE DEFLECTOR RETRACTED, HEATER OFF
2. INTAKE DEFLECTOR EXTENDED, HEATER OFF
3. HEATER ON, INTAKE DEFLECTOR RETRACTED
4. HEATER ON, INTAKE DEFLECTOR EXTENDED



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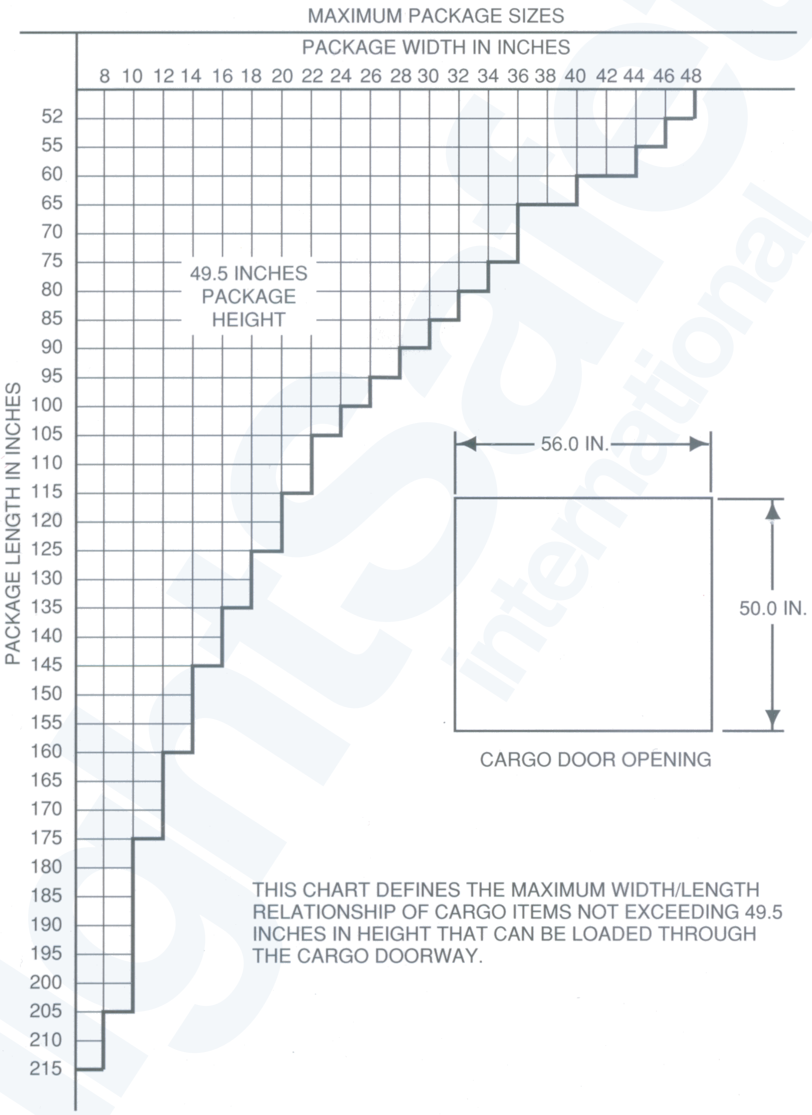
CARGO DIMENSION CHART



THIS CHART DEFINES THE MAXIMUM WIDTH/LENGTH RELATIONSHIP OF CARGO ITEMS NOT EXCEEDING 49.5 INCHES IN HEIGHT THAT CAN BE LOADED THROUGH THE CARGO DOORWAY.

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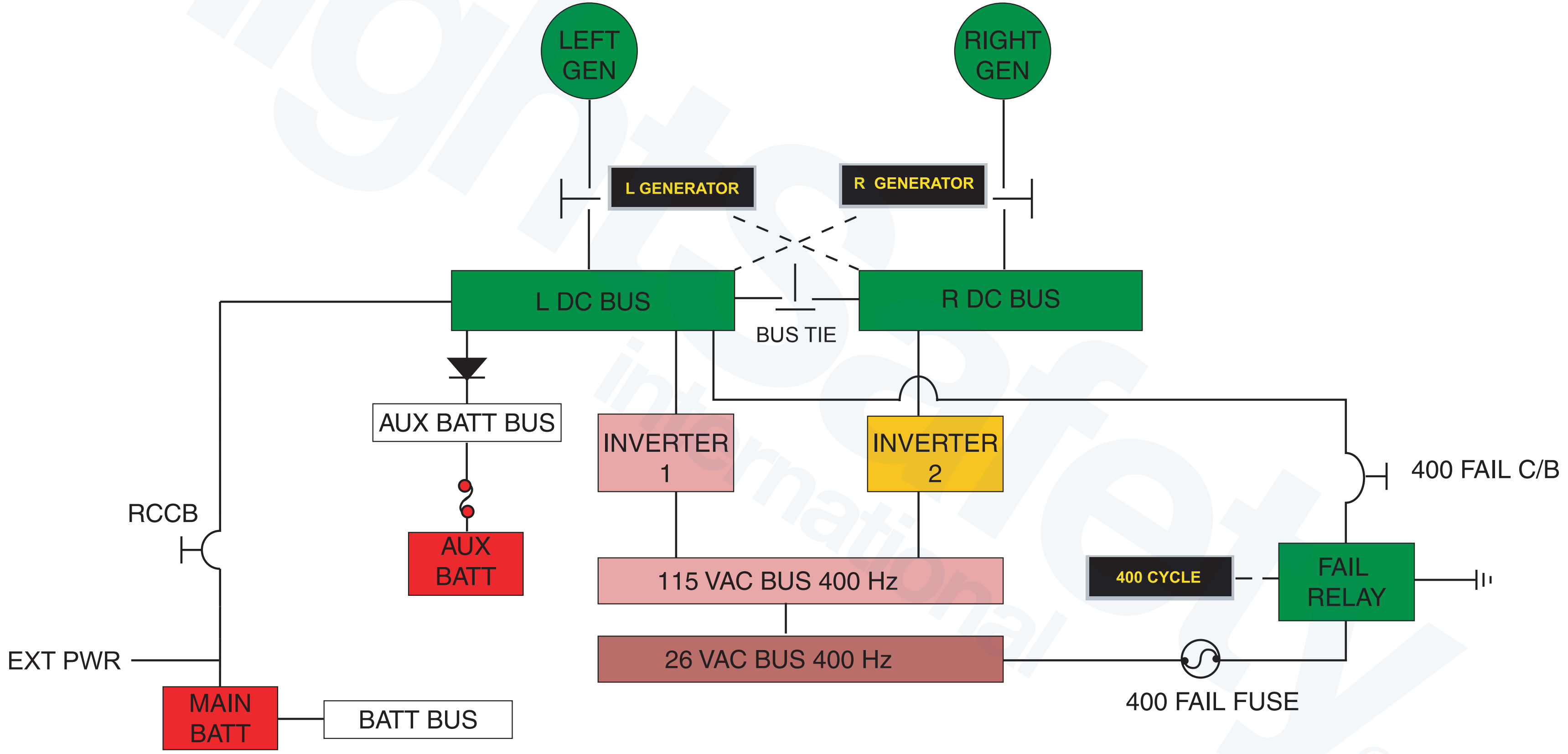
Electrical System (PRE MOD 6/1651)



FOR TRAINING PURPOSES ONLY

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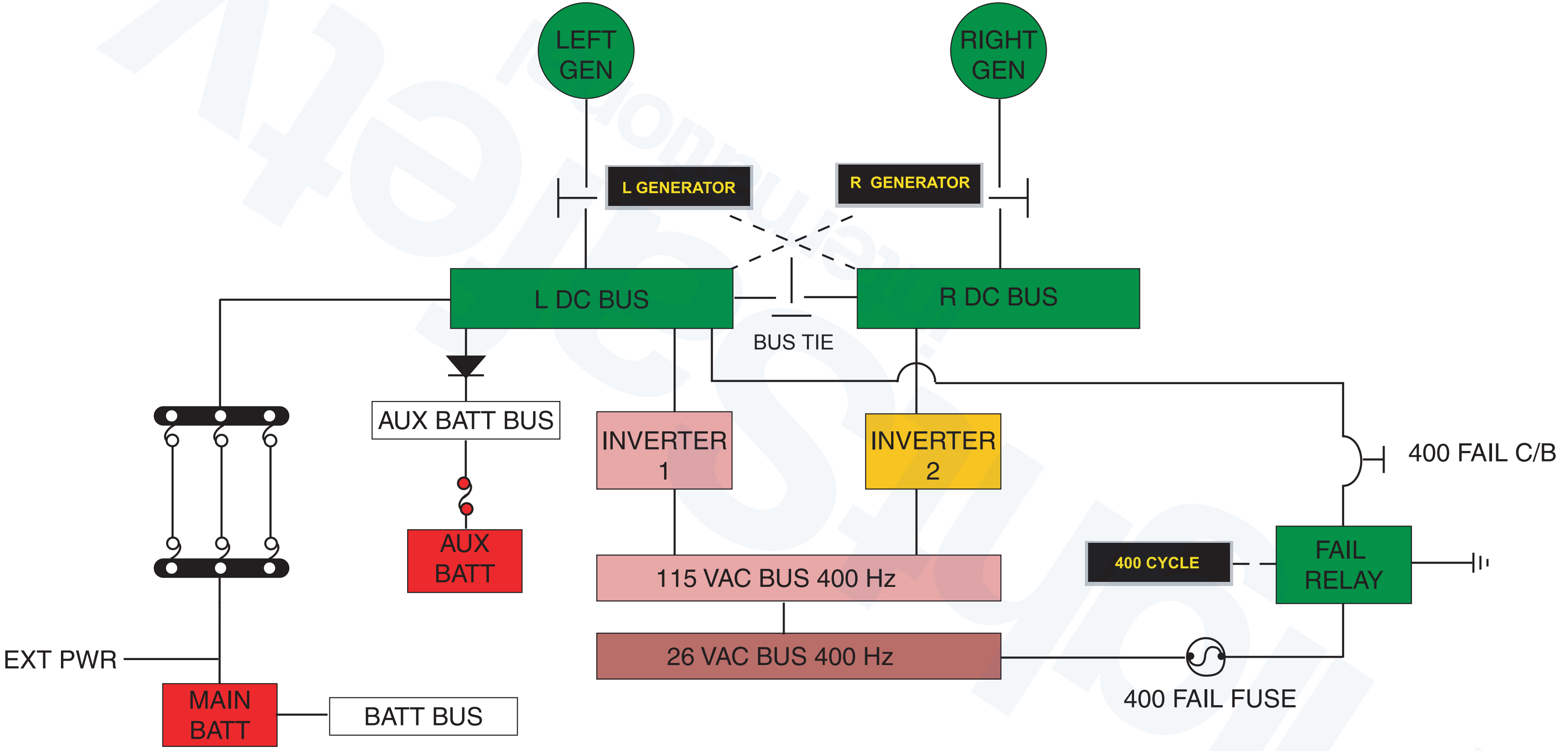
Electrical System (MOD 6/1651) Current Limiters



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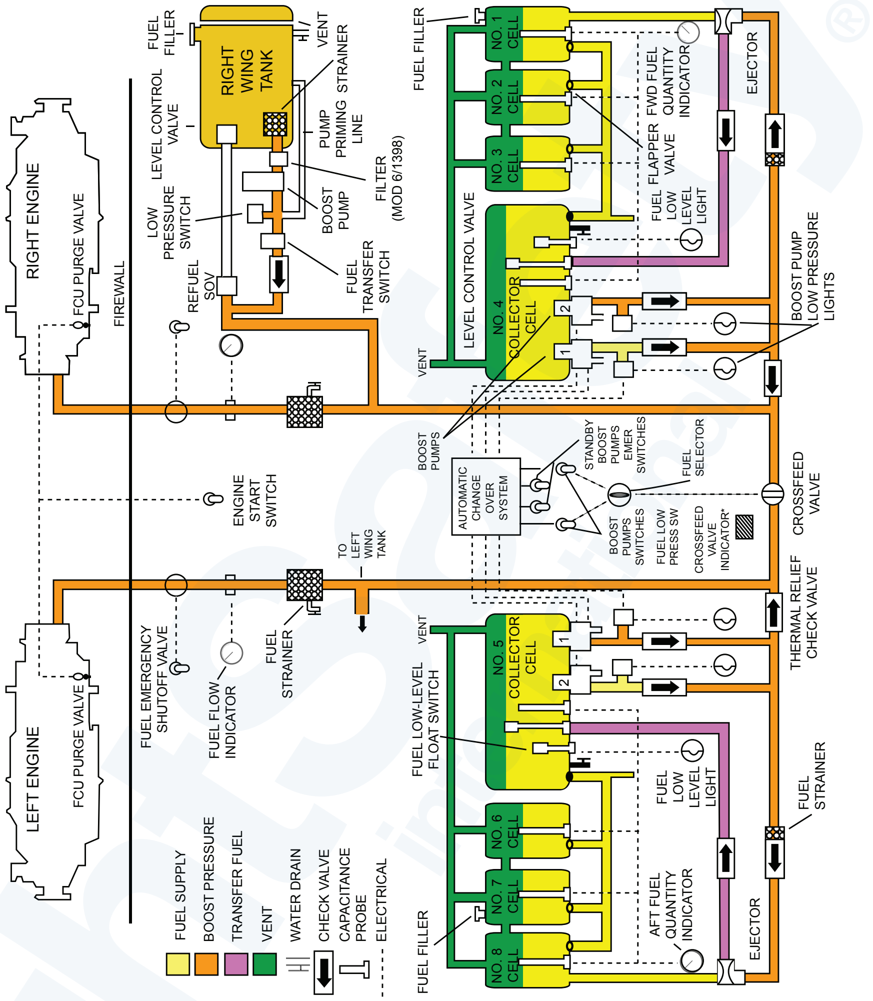
DHC-6 FUEL SYSTEM



PILOT NOTES

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